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LECTURES ON COMPARATIVE ANATOMY AND ANIMAL PHYSIOLOGY,

DELIVERED BY

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LECTURE XV.

ON THE OSTEOLOGY OF SERPENTS.

We have in the structure of the skeleton of the serpents, the first of the true reptiles to which we now come, a beautiful illustration of the simple means employed in organic structures to accomplish the most numerous and diversified ends, and of the resources of nature in adapting the forms of bones, in all their essential and common parts, to the various uses the animals are to make of them in the living state. We have here animals destitute of anterior and posterior extremities, destitute of arms and legs, of hands and feet, yet capable of a great variety of those active movements which we see in animals the most gifted with those parts. We see them as if running on all fours, pursuing their prey, rapidly winding through the turf, and through the low vegetables that cover extensive plains. If the prey, to escape from danger, should betake itself to trees, and imagine itself there to be in safety, we find these animals winding like an ivy-branch round the tree, and almost without apparent motion of any portion of their trunk, gliding as if they were sticking by suckers to the trunks of the trees they climb, till within reach, and then with a velocity like an elastic spring let loose, they dart forward and twine round their prey. If their prey should even rise from the ground into the air, we see these serpents, as if they were gifted with wings, spring with velocity from the ground, dart upon the bird and seize it, or if the animal be a quadruped, and plunge for safety into the water, the serpents still pursue them in that element, swimming like fishes; and yet look to the simple condition of the skeleton. It consists of a vertebral column and ribs; and with that simple condition of the solid internal frame-work, we see all those varied movements effected.

*V**

The vertebral column (*V**) here composes almost the entire skeleton, for we have already seen that the ribs are only prolongations of, or parts developed from, the transverse processes,—a vertebral column pliant like a cord in all directions, but solid in each particular bone, to give attachment to powerful and vigorous muscles, both for the strength and the velocity of all the motions of the animal. This condition of the vertebral column, its great flexibility, is given at the same time with great security in all its articulations, which are here remarkably numerous, between each pair of vertebræ. We observe that this strong and flexible column is

subdivided into a greater number of bones or vertebræ than we find in any other vertebrated animals, forming thus a striking contrast with many of the batrachian animals we were examining yesterday, as the frogs and the toads, which have the fewest vertebræ of all known animals. We observed that these bones composing the vertebral column of serpents, in order to give greater extent of flexibility, are more curtailed of all long projecting processes or appendices, and are more reduced to the form of simple cubical pieces, than we find in any other animals. When we examine in detail more narrowly the forms and the numerous articular surfaces of each of these vertebræ, we see in the whole structure a beautiful adaptation to the living exigencies of these active and muscular though armless animals,—to the flexibility of their entire column,—and to the security of each articulation. The vertebral bodies terminate before by a deep, smooth, concave, articular surface (Z^* *b*), with sharp margins, lined with cartilage, and lubricated with synovia; the bodies of the vertebræ terminate behind in a very regular, oblique, smooth hemispherical eminence (Z^* *a*). These meeting together, are locked into each other, and secured by the strong capsular ligament. They are lubricated by a secretion of synovia, and they form thus a secure and extensively moveable articulation; not that kind of articulation which we see in quadrupeds where but little motion is allowed or required in the trunk. It is not here an elastic, fibro-cartilaginous substance that is placed between the bodies of the vertebræ, to allow a certain limited degree of compression in every direction, and thus to admit of comparatively little motion in the whole column, but the vertebræ of serpents play freely over each other upon lubricated articular surfaces.

When we examine the sides of these vertebræ, we might be induced to imagine at first, that we have lost the transverse processes on all the vertebræ anterior to the caudal. Where are those lengthened transverse processes that we see so generally in higher animals? They would have been inconsistent with the free lateral motions required in serpents, where the motions of the trunk are chiefly lateral. We observe that only the base of the transverse process (Z^* *c*, *c*) is preserved, and that it terminates in an articular surface, extending downwards and inwards—a convex, smooth, articular surface, upon which plays the concave articular surface (*B B c*) of each rib. Thus the ribs of serpents (Y^*) are, as it were, the transverse processes developed, but detached at their base by a freely moveable articulation. That great mobility of the ribs, on the transverse processes in serpents, is necessary, from their employing them as legs in progressive motion, and in consequence of the compression exerted upon the sides of the vertebral column, in the climbing and leaping of these animals, in the strangling of their prey, and in the twining of their bodies round the branches of trees, where they often lurk in concealment, or engage in contests with their natural prey.

We observe a remarkable form in the two pairs of oblique or articular surfaces (Z^*) of these vertebræ. We see that the vertebra before, sends its posterior articular processes in the form of flat horizontal plains, on each side, over the two anterior articular processes of the vertebra immediately behind. And having these articular surfaces directed horizontally outwards, parallel with each other on the different vertebræ, we observe that they slide laterally in such a way as to allow of very extensive motion in that direction. The bodies of the dorsal vertebræ are carinated below, and have a contraction or cervix at the base of the rounded posterior articular tubercle (Z^* *a*). The laminæ are very strong parts of the vertebræ of serpents, and the texture of all these bones is remarkable for its compactness and density, considering that we are speaking of the lowest of the cold-blooded reptiles. This texture of the skeleton is required to give it strength for the necessary resistance to the powerful muscles, during the vigorous and instantaneous efforts which the serpent exerts at once on all parts of its vertebral column, when it is about to spring from the ground into the air. That action is done by coiling the body closely round, for which the vertebral column requires the greatest flexibility, into a narrow space, like a common steel corkscrew pressed down till all its turns touch each other. Then, like a screw thus com-

pressed, or a steel-spring let suddenly loose, it would instantaneously bound by its elasticity from the solid surface upon which you pressed it. Such does the serpent's leap appear, for, with an instantaneous effort of all the muscles connected with the vertebral column, it rises in a moment to assume the straight line; but in doing that, it presses forcibly and successively upon the ground with all the posterior parts of its body touching the ground, to get the last remnant of the impulse with the last part of the coccygeal vertebræ; by all this effort of the muscles of the trunk, and with that impulse from the ground, it is carried with rapidity forward by successive leaps to considerable distances. We have thus the most perfect and beautiful example to be met with, in the class of reptiles, of a character we shall find to pervade all the orders,—to pervade not only the order of ophidian reptiles, which we are now speaking of, but also the saurian and the chelonian reptiles—the ball and socket joints of the vertebral column (Z^a *a*, *b*).

The spinous processes of the vertebræ of serpents are small; they extend backwards and forwards to a considerable extent, and they have thus a pretty considerable surface for the attachment of muscles, but they are very limited in their development upwards, where they terminate abruptly in an even truncated margin. That smallness of the vertebral foramen which you observe between the very thick and strong laminæ, is common to serpents with all the other forms of reptiles. The foramen or medullary canal of each vertebra is here, you perceive, in these large vertebræ of the *boa constrictor* (Z^a), distinctly expanded at its anterior and posterior ends, to prevent the very free lateral motions of these vertebræ on each other from compressing or affecting the contained spinal chord, or the nerves which enter to that chord through the intervertebral foramina. This is a character which we find repeated in all the extensively moveable vertebræ of animals, where the vertebral canal is applied to the surface, or corresponds to the form and magnitude of the contained spinal chord, as we see in the most moveable portions of the vertebral column of higher reptiles and of birds and mammalia.

The comparative smallness and narrowness of the vertebral canal, is an interesting character in the osteology of reptiles. It corresponds with the small development of the spino-cerebral axis. You may, perhaps, say, that in fishes, where the spino-cerebral axis is smallest, we have large foramina in the vertebræ; so we have already seen, that there is a large cavity of the cranium in fishes, to enlarge the exterior surface for muscular attachments. The cavity of the cranium, however, which we are coming to now, is applied to a more important purpose than to cover a large accumulation of a fluid matter, or to expand the exterior surface for the insertion of muscles. That was the case both with the cranium and with the vertebral column of the fishes. In them the cellular arachnoid coat is developed, and that liquid or semi-fluid cellular substance fills alike the greater part of the cranium and of the vertebral canal; but in serpents, the cavity of the skull is occupied by the brain alone, and so is the vertebral column by the spinal marrow; therefore we are coming now to animals where we can obtain from the dimensions of the cranium and of the vertebral canal, a measurement of the development and magnitude of the brain and spinal marrow. This is an interesting fact even to the geologist, for nothing is more common than to find in the older secondary rocks, vertebræ of great size belonging to extinct reptiles; and these sometimes are confounded (by those who are not acquainted with the typical characters of the vertebræ in each class of animals) with the vertebræ of the highest warm-blooded animals,—the mammalia; but in these fossil vertebræ of reptiles we still observe that most obvious character of the smallness of the foramen for the transmission of the spinal marrow, serving—that little character of itself serving—to separate these vertebræ altogether from those of the mammiferous animals.

Passing forwards from the vertebral column, we come to the continuation of that column through the head; and here we observe, as in fishes and amphibia, that the whole of the cranial vertebræ are still in a line with those of the rest of the column. We have not yet arrived at those animals which begin to manifest a sudden change in the direction of the nervous canal from the commencement of those cranial vertebræ. That change of direction is produced partly by the various positions of the body and of the food of animals, but chiefly from the enormous development of that part of the nervous system which in higher animals is contained within these first cranial vertebræ,—a development of this part of the nervous system, which swells out the superior laminæ of the cranial vertebræ to an enormous extent, and renders a change in the direction of the bodies of those vertebræ necessary. Here, however, in the serpents, we have not yet come to those forms where the superior laminæ of the vertebræ, or

those enveloping the nervous system, are so much metamorphosed by expansion.

On looking at the occipital bone in this large head of the *python* (*Z*** *a a b*), we

perceive that the four elements of that bone in the serpents remain permanently detached. The basilar bone (*Z*** *a*) remains permanently detached from the two condyloid (*Z*** **a*) pieces, and these three elements contribute to form the single occipital condyle, which is lengthened transversely, and has its basilar portion the largest. The median portion or element (*Z*** *b*) of the occipital bone above, remains detached from the other three, forming thus the four centres of ossification that exist in the human occipital bone at an early period.

Examining the parietal bones (*Z*** *c c*), we find here a remarkable contrast with the detached condition of those bones in fishes, and with the loose condition of the other cranial bones of serpents. We observe them, as in the lower vertebrated animals, much lengthened forwards and backwards; that they shoot forwards from beneath the long, loose, squamous portions (*Z*** *e*) of the temporal bones, and form a large and dilated portion of the cavity of the cranium; that is, in consequence of the longitudinal development of the whole cerebral mass in the cold-blooded oviparous animals. In the warm-blooded animals the hemispheres of the brain develop upwards, laterally, and backwards, until they come to cover all the rest of the brain and the cerebellum. That produces an expanded form of the cranial vertebræ altogether different from this, in which the cranium is but a narrow tube passing through the centre of the head. We have here, therefore, only those portions of the human brain that first appear in the embryo, and that lie along the base of the cranium yet developed. All the superficial convoluted parts, the higher expanded parts covering the lateral ventricles must be shorn off, as it were, to arrive at this simple lengthened condition of the serpent's brain. Then, having this lengthened and embryo form of the medulla oblongata, of the optic lobes or the corpora quadrigemina, and of the hemispheres of the brain, we have in consequence a lengthened form of the cranium, and of those bones especially which encompass the brain. But we observe here that these two parietal bones have anchylosed, and formed a solid and dilated arch over the middle portion of the head. And you observe that these are the only bones of the whole series, either of the cranium or of the face, which present that immoveable and solid character. We are speaking of animals whose living habits are to creep on their belly, and to conceal themselves among the herbage, which ruminating quadrupeds are instinctively impelled to trample upon and to eat. No animals, then, can be conceived to be more liable or more exposed to the trampling of quadrupeds and other heavy land animals, than these serpents. The most important part of their economy—that which is to protect them against the injuries they are exposed to,—is that portion which is to supply energy and feeling to all their muscles and organs of sense—the great centre of the nervous system, the brain. Here, therefore, it is provided, where no other part of the whole head is so protected, with two strong arched bones, anchylosed on the median plane, which were originally detached along the median line. But another and a more important reason for the anchylosis of the two parietal bones is the development and the powerful action of the temporal muscles, which would pull the two parietal bones asunder if they were here as loosely connected together as the other bones of the cranium. It is on this account that we generally find these two bones anchylosed in all the orders of reptiles, where the sutures are never so well developed in the cranial bones as in the skulls of mammalia. And in the carnivorous mammalia, where the temporal muscles rise upwards over the whole surface of the parietal bones, and tend powerfully to tear them separate, these two bones are almost always the first to unite and anchylose on the median plane, as in serpents.

The frontal bone (*Z*** *i h*) has here its

four elements permanently detached, and the posterior frontals reach forward to the lachrymal and nasal bones. The nasal bones (*Z*** *p*) are remarkable for their breadth and length, tapering both upwards and downwards, as also are the lachrymal bones (*Z*** *l*), remarkable for their magnitude and breadth. We observe that the jugal bones (*Z*** *k*) here form the whole posterior boundary of the orbit.

The upper jaw-bones (*Z*** *m*; *A A*, *b b*) are perfectly moveable upon the jugal, the lachrymal, the intermaxillary, and the palatine bones; and the palatine bones (*Z*** *n*; *A A*, *d d*) are moveable on the maxillary, and on all the bones that come in contact with them. They are largely developed, and they receive the insertion of the two inner rows of teeth. The teeth of serpents, which are most constantly present, both in the innoxious and in the poisonous species, are those which have attachment to the palatine bones; not those in the upper jaw-bones. We observe that the upper jaw-bones are placed apart from each other, and from the intermaxillaries (*A A*, *a*; *Z*** *q*) at the median plane, and perfectly moveable in every direction, so that you can push them asunder to some distance, as in fishes. Extending backwards to the articulation of the lower jaw, we observe the temporal bone to have its squamous portion (*Z*** *e*) developed much backwards, in a longitudinal direction; that it is detached from, and freely moveable on, the petrous portion (*Z*** *d*), containing the organ of hearing, and has an articular surface upon which plays the tympanic portion (*Z*** *f*; *A A*, *g*, *g*) of the temporal bone, familiar to you under the name of the os quadratum, a name commonly given to it in the class of birds, where it has a quadrangular form. It is here largely developed, and strong in the *boa* and in the *python* (*Z****), and has at its upper and lower extremity a distinct moveable articulation. Its lower end plays upon the posterior extremity of the lower jaw (*A A*, *h*, *h*; *Z*** *g*); so that the lower jaw, being perfectly moveable both before and behind, can allow its two lateral portions to be stretched to a great distance from each other. We observe that the lower jaw is composed on each side of several pieces slightly moveable upon each other. Anteriorly, however, at the symphysis we find an interval of considerable distance, in which are the small intermaxillaries, supporting a few teeth, as you see in this beautiful specimen before you of the skeleton of the *boa constrictor*. In the recent state, upon looking at that animal, you perceive under the lower jaw a black elastic substance, like indian-rubber, at the symphysis of the lower jaw where the scales are deficient. The scales possess so little elasticity and extensibility that it is necessary in serpents to have the body covered with them, subdivided into innumerable minute parts. They do not themselves stretch when the body stretches, but they separate from each other; and of all parts that require to be separated from each other for the living habits of these animals, the portions of the lower jaw are certainly the principal. The serpents must swallow animals entire. They have neither hands nor feet to hold down their victim till they might tear its limbs piecemeal from the carcass, nor do they need them. They have not fixed teeth adapted for such a function. Their teeth have the shallowest and most moveable articulations that we have to meet with from this order of cold-blooded animals up to man. The teeth are conical, slender, sharp, osseous, recurved, similarly-formed spines covered with enamel, placed in very shallow alveoli along the lower jaws, along the upper jaws, in the intermaxillary bones, and along the palatine bones. By their direction they serve not for mastication, but to seize and to retain the victim, that it cannot escape from their grasp. The prey of the serpents is necessarily swallowed entire. We find these animals swallowing quadrupeds and other animals that have ten times the diameter of the neck of the serpent, through which neck the carcass is to pass. Here is an example of this before you in the case of a small snake, the neck of which is not so thick nearly as my little finger, yet the animal you perceive has swallowed down a large full-grown frog distended with all its spawn ready to escape, and the serpent has lodged it in its stomach without dividing it, and without scarcely lacerating its skin. If that animal had had jaws that were fixed, the lower jaws fixed at the symphysis, and the upper jaws also fixed at the intermaxillary suture, it could not

have opened the mouth to the extent necessary to allow such food to pass; it would have required some means of holding the living prey, until it might be torn to pieces small enough to pass through the narrow opening of the jaws in this fixed condition. But by this loose condition of all the bones surrounding the mouth of serpents, we see that they can distend their jaws and mouth to receive undivided prey much wider or larger than the diameter of their own body, and can thus, so far as the food is concerned, dispense with arms to grasp it, and assist in its subdivision. It is by concealment and watchfulness they must obtain their prey among the herbage which so profusely clothes the surface of the dry land; and to have raised up their worm-like trunk, by mounting it upon arms and legs, would have rendered such concealment impossible, would have prevented them from gliding through the minutest apertures of rocks, or burrows, or trees, or ruins, in pursuit of their prey, and would have frustrated the object of these vertebrated worms in the creation. Hence we see the necessity of this remarkable looseness in all the bones of the face, and this remarkably lengthened development of both the squamous (*A A, f, f*) and the tympanic (*A A, g, g*) elements of the temporal bones. The feeble attachment of the teeth corresponds with the feeble attachments of the numerous bones on which they are supported. It is easier for a serpent to renew its loose teeth, than it would be to renew the jaw-bones, which would often be torn away by the struggles of their wounded victim, if their hook-like teeth were immoveably rooted in these slender and loose jaws. The upper maxillary bones in the poisonous serpents, terminate suddenly before the orbits in a rounded tubercle on each side, which supports the tubular poison-fang, and the very small teeth which generally accompany it behind its expanded base, the large poison gland being situate along with the lachrymal gland on each side behind the orbit, and sending forward its duct to the tubular base of the fang.

We observe that here (*V**) the vertebral column supports ribs from the atlas to the commencement of the coccygeal vertebræ. Some would say, in common language, that the serpent wants cervical vertebræ, and, probably, that it wants lumbar and sacral vertebræ. Viewing, however, the ribs, in their true light, as developments from the transverse processes, we see that in reality there are no vertebræ that are absolutely wanting, though they may have their elements variously developed; none of the vertebræ of serpents between the cranial and the coccygeal are destitute of these elementary parts, those detached parts called ribs, at the extremities of the transverse processes, which continue moveable through the whole of life. That is not peculiar to serpents; we have seen already in fishes, that the ribs there also pass forwards on the vertebral column as far as the cranium. In crocodiles we are accustomed to see moveable transverse processes of the cervical vertebræ; it is the same phenomenon that we witness here. Nay, we have these detached portions of the transverse processes extending forwards, even in birds, beyond the most anterior of the true ribs. There are also quadrupeds that have this character. The three-toed sloth has, anterior to its true ribs, two pairs of moveable short, false, ribs,—one to the eighth and one to the ninth vertebra behind the occipital bone. Thus we have here a beautiful gradation in the development of the neck, which moveable part of the column is acquired, first by shortening these anterior ribs and transverse processes, and then by getting rid of them altogether, and that is most necessary in the class of birds. Birds have the anterior greater portion of their vertebral column free, like the coccygeal vertebræ of a prehensile tail, composed of numerous cylindrical pieces very moveable upon each other; and thus they have the neck so flexible in all directions, as to be able to sleep with it twisted under their wing,—as to move it in all directions as an organ of prehension, their hands being better employed for progression through the atmosphere. Looking at the free mode of attachment of these ribs of serpents, we see no attachment of a rib between two vertebræ, but every rib is distinctly attached to a single vertebra upon each of its sides. The rib (*B B*) plays over a convex prominent surface (*Z** *c*, *c*) of the transverse process, and has, therefore, the freest possible motion. To allow of this free motion, we observe that the ribs at their anterior extremities are not attached to sternal ribs; that there are, in fact, no sternal ribs; that there is in the true serpents the want of all trace of a sternum; so that there is the greatest latitude and freedom of motion in the whole of the anterior terminations of the ribs. These ribs are the organs of progressive motion, employed by serpents in all their ordinary movements of creeping. By this freedom of motion, given by their anterior termination being unfettered either by sternal

ribs or by a sternum, they act upon the abdominal *scuta*. The *scuta* of serpents are those transverse, broad, imbricated, horny plates that cross the lower surface of the abdomen, a name given them to distinguish them from the smaller subdivided horny *scales* that cover all the upper parts of their body. By the action of the ribs (which are moved by very powerful intercostal muscles) upon the extremities of these scuta, they give the scuta both a motion backwards and forwards, and actually serve for their erection from the flat surface of the abdomen; so that if you put your hand under the belly of the serpent that is creeping,—and they are generally most harmless and engaging creatures, though much persecuted by the ignorant,—you will find the little creature, as it moves over your hand by a slow but regular motion, erects its scuta, and you feel, while they are creeping, the erected ends of the scuta pressing as they are gliding over the surface of the hand. And if they are reaching up to a considerable height from the ground, and come in contact with your hand held above, they can take so firm a hold with the erected abdominal scuta upon the hand, that they can glide over it with a considerable portion of the neck, and ultimately be able to bring all the trunk in succession over the hand, and so the serpents can reach and climb from branch to branch on trees by means of their ribs, as if they were grasping with arms and hands.

It is no imperfection then in the skeleton of a serpent to be destitute of a sternum and of sternal ribs. It is the most advantageous arrangement which it was possible to introduce into the construction of the skeleton of serpents. In place then of serpents being most unfortunate, in consequence of their want of organs of progressive motion, in their want of legs and arms, they are gifted, like a centipede (*R* 1), with myriads of legs;—the ribs are their arms and legs. In order to give the ribs of serpents greater elasticity, lightness, and strength, they are hollow within, like the bones of birds, with thin, compact, and elastic parietes (*B B, b*). They are compressed and narrow from before backwards, strong and broad at their head (*B B, c*) and neck, and taper regularly to their ventral extremity. Their head presents a broad, arched, concave surface to form a free and secure articulation with the rounded transverse process of the vertebræ (*Z* c*).

But now reflect upon what we were discussing before, in speaking of the articulated animals with articulated members, and describing the skeletons of the myriapods (*R* 1). We observed that the central rings which encompass the body, the segments of the body, or their vertebræ, developed lateral prolongations that served them as organs of motion; and some have traced an analogy between those legs of the myriapods, and the ribs of serpents, and, consequently, of man. Others, however, from observing the great difference of form between the legs or jointed members of these articulated classes, and the ribs most known to us of quadrupeds, have not been able to perceive the analogy which exists between those dissimilar parts, But you observe, that in both cases they are the organs of progressive motion. The function in both cases is the same. In both they are the first lateral parts developed from those osseous or consolidated rings that encompass the nervous system. But you will say, that in the myriapods, besides the nervous system, all the organs of the trunk were encompassed by those rings. In these simple animals all the organs of the senses, all the important nervous parts connecting them with surrounding nature, and warning them of danger, are but in their embryo state. Hence this solid protection made by the bodies of their vertebræ, enveloping all their trunk. In place, therefore, of the cavity of their vertebral column being devoted to the filaments of the nerves alone, these bodies of the vertebræ, in the articulated classes encompass every vital organ, and then they give rise to those arches we saw forming jaws, legs, &c., as we see in the serpents. You, perhaps, may consider it too much for any one to say that the ribs of serpents can be their organs of progressive motion. They are, it is true, organs of respiration, so they are also organs for the protection of the internal viscera. But when you look at the skeleton of this flying dragon, you see that the ribs are, again, organs of progressive motion in this saurian reptile, which has both arms and legs, and is not in the condition of a serpent; the ribs are shot out in straight lines which support a parachute. Thus there is nothing new in the ribs of serpents serving as organs of progressive motion, like the appendices developed from the hollow bodies of the vertebræ of *articulata*.

Some serpents, as is the case with the poisonous spectacle-snake, that is taught by the jugglers in India, by putting it upon heated irons, to leap about to the sounds of music for the amusement of ignorant spectators,—we observe that that animal has such mobility in the ribs of the anterior part of the neck or body, that it enables the animal to expand and stretch itself out in the region of the neck. It inflates the neck, and stretches it out, dilated,

by raising its cervical ribs. Then is heard its loud hiss, and it advances its elevated, dilated, ornamented part, by which it is accustomed in its natural state to strike terror into its prey. Birds seeing the glaring eyes, the blood-red gaping mouth, and sharp poison-fangs of these snakes, —hearing their hissing noise in their enraged state, and beholding them advancing with a gliding motion rapidly before them, they seem stupified, or as if electrified; and in olden times it was thought that the affrighted birds were, somehow or other, charmed or fascinated by these animals, and that in gliding unconscious of danger through the air they came down, drawn by attraction, into the serpent's mouth. The poor birds taking the direction to their home, to their nest, and to their young with the food they had procured for them, are suddenly arrested by the sight of the serpents, their natural and most bloody foes, and no wonder they should be seized with surprise, and should stagger, confused by the spectacle, without any of those mysterious influences which were formerly attributed to the slow-gliding armless serpents.

Some of the serpents which are most allied to the *sauria* have the rudiments of anterior extremities beneath the integuments; nay, the boa constrictors have the rudiments of legs extending from the integuments at the sides of the anus, and even those which I hold in my hand, the *anguis fragilis*, and a few others that are closely allied to this, have the scapular apparatus which we saw yesterday for supporting the arms of the frogs. This circle, formed by the two portions of the scapula, and its coracoid portion, we find here as in the saurian reptiles. We find a few species actually presenting the rudiments of the pelvis.

Looking at the back part of the vertebral column, in this skeleton of the *boa constrictor* (*Y**), where the ribs cease to be moveable, we come to very long, broad, arched, expanded, and bifurcated transverse processes of the coccygeal vertebræ, as it were ribs anchylosed to the transverse processes of these posterior or pelvic vertebræ. These broad transverse processes of the most anterior of the coccygeal vertebræ, for they are confined chiefly to those, give protection to a pelvic cavity which contains in the male the organs of intromission. These organs are situated in a lengthened cavity behind the anus; so that these important parts, though situate behind the anus, have still all the advantages of ribs. In the beautiful articulated specimen before you, these transverse processes shoot out, some of them more than an inch from the sides of the vertebræ, so that they afford protection to a considerable cavity upon each side. The male organ here protected is double; there are two organs in fact, and each of these very long organs has a double glans, and they pass out through the cloaca. They are required to be long in serpents, on account of the want of prehensile organs. We shall see, in examining these male organs, that they are developed in length, in proportion to the want of prehensile organs. In tracing these coccygeal vertebræ backwards, we have, again, an analysis of a vertebra, though not so complete as in the caudal region of long-tailed mammalia, where its elements, developed around the body, are gradually shorn off, until we come to their bodies alone at the extremity, the central element of the vertebra, around which all the other parts are developed.

You observe that the column is remarkable in the coccygeal region for its minute subdivision, consisting of a chain of exceedingly minute vertebræ, thus giving the greatest flexibility to this terminal part; and there is also preserved the greatest security in the articulations of this part in all serpents, by its subdivision into so many pieces, and the remarkable preservation of all the elements of these extremely minute coccygeal vertebræ.

This is the part of the body that is commonly employed for fixing the animal round the branches of trees when watching the accustomed prey coming to drink of the streams under the shadowy boughs. The boa constrictor, and the larger snakes, have their posterior part firmly twined round the stems and branches of the tree while the anterior part of the body is lying along the upper surface of the branches, quite free and ready for action. The posterior part is twined like a rope to obtain a firm purchase, and when the deer or other animal comes to drink under the tree, the snake lets down the whole of its anterior free part of the body, twines forcibly around the body of the quadruped, bites it, breaks its ribs, kills it, and proceeds soon to attempt to swallow it. Sometimes the alarmed quadruped betakes itself for safety to the water; so does the snake in its pursuit, and we see it swimming in that element like a fish, by the lateral serpentine motions of its whole body. So that although the serpents are the most destitute of organs of progressive motion of all the vertebrated animals, they are almost the only species which can imitate every mode of progression to be met with in other classes. Their simple skeleton, consisting of a vertebral column and ribs, is but one stage above that of the *annelides* and the *myriapods*, and is the emblem of

that of man and mammalia before their arms and legs begin to bud from their sides. It is in this tribe of animals, the first we have come to from the monads with two auricles and a ventricle, that we trace the chain of developments from the eels among the osseous fishes to the bimanous and the biped saurian, and the most elevated reptiles of the dry land.

CLINICAL LECTURE

ON

THE INJURY CAUSED BY TAKING BOILING WATER

INTO THE

MOUTH AND FAUCES.

Delivered at Jervis-Street Hospital, Dublin, 1833.

By WILLIAM WALLACE, M.D., M.R.I.A., &c. &c.

Gentlemen,—The subject to which I propose to direct your attention this morning, is the injury caused by taking boiling water into the mouth and fauces. I have selected this subject on the present occasion, because we have at this moment in hospital a very interesting case illustrative of it,—the case in which a few days ago I performed the operation of tracheotomy, and which has afforded in its results a good deal of gratification.

You are aware, that a habit prevails among the poor in this country, of giving their children drinks of cold water from the spout of a common tea-kettle, and in consequence of this practice, these little creatures not unfrequently attempt, when alone, to drink from the same utensil placed on, or recently taken off, the fire, with its contents in a state of ebullition, or approaching to it; hence the injury in question.

It is remarkable, that notwithstanding the frequency with which this accident occurs in this country (I have seen at least twelve cases of it), and for aught I know in others, there was not the slightest allusion to it in any medical writing, prior to the period (eleven years ago) at which I recommended for its relief, under urgent circumstances, the operation of tracheotomy. Since that period, however, the injury has been the subject of two or three essays. You will find one in the twelfth volume of the *Medico-Chirurgical Transactions of London*, and another in the fourth volume of the *Dublin Hospital Reports*. For the former we are indebted to Dr. Marshall Hall, and for the latter to Dr. Burgess of Clonmel.

If a child grasp in its mouth the pipe of a kettle containing boiling water, with the intention of taking a drink, it is clear that the act of suction will cause a greater or smaller quantity of water to enter the mouth. Now what will be the effect of this water of high temperature on the surfaces to which it is applied, and what the extent of surface to which it may be so applied? The examination of these questions will put you in possession of the injury of structure which this accident causes, and of the extent of that injury.

You know that when boiling water has been applied to the common integuments (and these bear the most striking resemblance to mucous surfaces, particularly at their origin, or where they are continuous with the skin), the consequence is, in general, a rapid production of large vesications. You are not however to suppose, notwithstanding the analogy which exists between the structure of the skin and mucous membranes, that such vesications are formed when the latter have been subjected to the action of water of a high temperature; for if any vesications do arise on these membranes from such a cause, they are of a very minute character, resembling small pearls, or the vesicles of eczema. Nor is it difficult to account for the difference in the result of the application of boiling water to mucous and cutaneous surfaces. The cuticle, when it exists in the former, is, you know, remarkable for its tenuity, if compared with that which invests the latter,—for its possessing a closer adhesion,—and also, probably, for being perforated by a greater number of foramina. To these circumstances, therefore, are we to attribute the peculiarity to which I have alluded. In proof of this, let me remind you of what occurs when a blister, or boiling water, has been applied to the hairy scalp. On such occasions, we never have large vesications produced. In fact, they are always minute or pearl-like, and are uniformly ruptured before they arrive at the magnitude of a small pea, owing, no doubt, to the close adhesion of the cuticle of the scalp, to its thinness, and to the number of foramina with which it is perforated—causes precisely the same as those which prevent the formation of large vesications on mucous surfaces.

I would not, Gentlemen, have thought it necessary to direct your attention so particularly to this point, were it not to correct the supposition that exists, that large vesications are formed at the upper part of the larynx, in the cases to which

we are alluding; that to those vesications the obstruction to respiration, which essentially constitutes the danger, is to be attributed, and that they may be broken down, and the dangerous symptoms removed, by the introduction and pressure of the finger. But the obstruction to breathing, and consequently the danger, do not arise from the presence of either large or small vesications, so much as from œdema or submucous effusion, the result of the inflammatory action which quickly supervenes. Of this I am convinced from dissection. In fact, when you dissect such cases, you will seldom find even minute vesicles, but you will uniformly observe the mucous membranes to which the water may have been applied, to be wrinkled and thickened, and its subjacent cellular tissue infiltrated or œdematous. Remember, therefore, that the application of water of a high temperature to the mucous surfaces, causes minute vesications, inflammatory action, and, subsequently, submucous effusion.

There is also an error prevailing with respect to the extent of surface injured on these occasions, against which I wish to guard you. It is supposed by many, and naturally so on a first view of the matter, that the boiling water gets into the stomach, and that the fatal symptoms are, at least in part, a consequence of inflammation of that organ. But, I have never observed, in those cases which I have had an opportunity of dissecting, that the inflammation extended beyond the upper part of the larynx and commencement of the œsophagus. Nor have we any difficulty in explaining this limitation of injury, when we reflect, that the muscles of the pharynx as well as the muscular tissue of the œsophagus are, most probably, thrown into such a spasmodic state by the stimulus of the water, as must prevent its passage into the stomach. Hence, if any vomiting occurs in these cases, we must rather refer it to the irritation of the fauces, and the sympathetic influence of this on the stomach, than attempt to explain it by supposing that the stomach has received any injury from the direct application of the boiling water.

It is remarkable that the alarming symptoms which follow this injury do not, in general, occur for a considerable time; that is, for some hours after the patient has attempted to swallow the boiling water. This may be explained by the fact which I have just mentioned,—the production of sub-mucous effusion by the resulting inflammatory action. No doubt, considerable pain of the lips, mouth, and fauces, immediately succeeds the accident; but, notwithstanding this, it generally happens that the young creature, exhausted by pain and crying, sinks into sleep, and enjoys several hours of apparently tranquil repose, before the urgent symptoms commence. The child then awakes, suddenly, with a croupy difficulty of breathing, and from this period the disease makes rapid and fearful strides. Respiration becomes much obstructed; the muscular organs employed in this function labour with great violence, and the heaving of the chest and the contraction of the abdominal muscles are very remarkable. I have seen the muscles exerted to such a degree on these occasions, that there seemed a general convulsive state of the body, and, by the act of respiration, a depression formed at the root of the neck, immediately above the sternum, into which I could sink several fingers, and a similar one, of larger size, near the extremity of the xiphoid cartilage. This difficulty of respiration is generally attended by a peculiar noise, emanating from the larynx, and is quickly followed, if not accompanied, by increased rapidity of the circulation. Indeed, the pulse becomes so frequent, that it is difficult to count it. When these symptoms have lasted for a period, sometimes longer, sometimes shorter, a new train of phenomena attracts our notice. The little sufferer either becomes extremely restless; tosses and tumbles about, gasping for breath, the surface becoming more or less pale and cold, and the state of restlessness persisting until death puts a period to its agonies,—or the frequency of pulse and respiration is soon followed by such a state of insensibility, as would induce us to conclude that the brain was more or less engaged.

Now, the important question is, What are we to do in these cases? What should be our treatment? Upon this subject, Gentlemen, I can speak with a great deal of satisfaction, because I think I can now point out a mode of treatment which will, generally speaking, be successful. You are to remember, that the principal source of danger arises from the obstruction to respiration, in consequence of inflammation and subsequent sub-mucous effusion in the glottis or upper part of the larynx; and if we can succeed in preventing this effusion, or in causing its rapid absorption, we shall be able to secure life to the individual.

Now, many of you are aware of the important agency of mercury in certain forms of inflammatory disease of the larynx, and the analogy which exists between these cases of scalded glottis (for, as I have above hinted, death arises on the latter occasions from the effects of inflammation)

induced me to consider whether mercury might not be beneficially employed in this injury. I have now tried this remedy in many cases, and I can state, that from its employment I have, in general, obtained the most satisfactory results. I believe I can scarcely afford you a more convincing proof of the value of this mode of treatment than by reading to you the notes of two cases, for which I am indebted to our present clinical clerk, Mr. Evers, a gentleman with whose zeal and acquirements you are all acquainted.

CASE I.

A boy, aged three years, drank boiling water from the pipe of a tea-kettle. He complained but little at the time, was put to bed, and slept soundly for two hours. (Thus you observe, that the violent symptoms did not come on in this case immediately after the injury.) He then awoke with obstructed breathing, and passed a sleepless unquiet night. When brought to the hospital in the morning (eleven hours after the accident) his eyes were fixed and staring, face pale, respiration 36 in a minute, accompanied by convulsive heaving of the chest, and a sonorous wheezing noise in the throat; pulse 140, and weak; extremities cold. When put to bed, he tossed incessantly from side to side, gasping as if he tried to escape from instant suffocation: would not permit his throat to be examined. (Here you have an instance of difficulty of respiration and rapidity of pulse, followed by one of the two series of symptoms which form the second train of phenomena—extreme restlessness.) Six leeches were applied over the larynx and trachea, and afterwards a blister to the upper part of the chest, with warm stimulating applications to the feet. Three grains of calomel were given immediately, and directed to be repeated every hour. About twelve o'clock, the mother of the child, thinking it was dying, took it away from the hospital, saying she had rather see it die at home. About four o'clock p.m. on the same day, the child was visited at its own residence, and was found considerably improved. The calomel had acted on its bowels, respiration was less impeded, pulse still very frequent, low, and weak. Eight o'clock, same afternoon, the bowels were again copiously moved, and the child was easier, but the mouth was not as yet affected. It was now directed that one-eighth of a grain of opium and three grains of calomel should be given every third hour. On the following morning, it was found that the child had slept well during the night; the breathing was much improved, the wheezing of the throat less; pulse 110; skin hot. The opium was omitted, and the calomel continued as before. At four o'clock on the same afternoon he was again visited. He had slept uninterruptedly since morning, and the bowels had been moved only once. The breath was evidently affected with the mercurial fetor, and the calomel was ordered to be discontinued; some jelly was given to the child. At eight o'clock on the following morning, fifty-eight hours after the accident, the child's breathing seemed perfectly natural: a draught of castor oil was now administered, and the same nutriment continued. On the next day the child was brought to the hospital, and exhibited to the pupils, who were quite astonished at its recovery, having seen it leave the hospital two days before, in an almost expiring condition.

CASE II.

The second case, of which I have the notes before me, is that of a fine child, two years and a half old. On the evening of the 27th of August, she took a drink from the pipe of a tea-kettle, and was brought to the hospital three hours after the accident, with excessively laborious respiration, tossing her head, and struggling like one breathing an irrespirable gas, her lips purple, veins of the neck turgid; pulse not admitting of being counted; deglutition impeded; constant singultus. Several leeches were applied to the neck, followed by stupes, and afterwards by the tartar-emetic solution. Some viscid fluid was spat up during the night, but there was no vomiting. Not appearing better on the next day, it was taken home, whither Mr. Evers followed it, and commenced the administration of calomel. The pulse was now (7 o'clock p.m.) nearly 200; skin intensely hot; bowels confined; other symptoms as before. He directed that the child should have a warm-bath, a purgative injection, and two grains of calomel every hour. On the following morning at seven o'clock there was considerable improvement. The little patient had had some hours sleep during the latter part of the night; the bowels were once moved; respiration, though still oppressed, was easier, and the pulse had fallen to 150. The calomel was directed to be continued as before. On the next morning it was found that the child had slept several hours; that the bowels had been well freed; that the breathing was nearly natural; pulse 130; skin moist; slight mercurial fetor on the breath. From this period the child got rapidly well, and exhibited no particular symptoms. Latterly the calomel had been given only every fourth hour.

Remarks on Treatment with Mercury.

Allow me now to make a few observations on these cases. The first thing which strikes me to remark on is, that you may suppose because other means were used, that the fortunate results might, in a great measure, if not altogether, be attributed to them. But I can assure you, that although it may be very correct to view those remedies as valuable adjuvants, I have no doubt that the result, in both cases, would have been fatal, if they alone had been used. This opinion I give most decidedly, from having observed on many occasions, even in much more favourable cases, their total inefficiency. Were I not averse from deviating too far from my subject, I would extend my observations upon the power which mercury possesses in arresting inflammatory action, particularly as I know the most opposite opinions on this subject prevail at the present period; for while on some occasions we are told that the existence of inflammatory action is a positive barrier to its employment, on others it is recommended as a powerful mean of subduing inflammation. Indeed, you have all witnessed the efficacy of mercury in subduing certain forms of inflammation, as, for instance, venereal iritis; yet you are told that inflammation, as an accompaniment of venereal symptoms, should always interdict the use of this remedy. Does not this present to your minds a striking contradiction? I can affirm, and many of you have observed, that I have frequently employed mercury with success in various forms of syphilis accompanied by inflammation, viewing inflammation in the common way. In truth, I am of opinion that the apparent contradiction which at present exists in the practice of medicine and surgery on this important subject, entirely arises from our not possessing any diagnostic mark by means of which we can distinguish inflammatory from various other morbid actions. But I shall have occasion frequently to revert to this subject, and, therefore, shall not enlarge on it at present.

The quantity of calomel, Gentlemen, which you should give in these cases, and the intervals at which each dose should be administered, will, of course, vary according to the urgency of the symptoms. If the case admits of some delay, you may give it in small doses; but if the symptoms be violent, you must throw it in as rapidly as possible. In very urgent cases, give two or three grains of calomel every hour, until the mercurial fetor of the breath becomes perceptible, or until the symptoms begin to alter for the better, when the intervals between each dose may be increased. If the case allows of time, two grains of calomel every third or fourth hour will be sufficient. You will be quite surprised to find how easily and well the calomel is borne by children, and how much less liable they are to serious intestinal irritation or salivation from its employment than adults. After the first dose, which generally purges, it seems to have but little effect on the bowels, and rapidly affects the system; but if the purging should continue, it will be necessary to combine with the calomel a small portion of opium, or, what is better, the compound powder of ipecacuanha; yet I cannot say that I have often found this necessary.

Although I am convinced from extensive experience, of the safety and propriety of giving calomel in these urgent cases in the large doses I have mentioned, I am glad to be able to tell you, that that excellent physician FRANCK, who holds the highest rank among clinical professors, recommends, in certain inflammatory affections of the larynx and trachea, so free a use of calomel as five grains at a dose, to infants of two years old, two or three times a day, or three grains every three hours.

You are not, however, I must caution you, to conclude, that because children bear calomel well, that they are also able to bear the employment of large doses of other medicines with safety. But you know how badly they bear opium or abstraction of blood. That calomel is easily borne by them in some chronic diseases, as well as in acute, those of you are able to testify, who have seen the case of a very young infant which is at present an out-patient of this hospital. It was brought to me labouring under what I consider the venereal disease contracted in utero. The face was extremely decrepit, withered, and covered with scaly crusts; the voice having a peculiar, husky, yet sharp sound; the nates and pudenda covered by numerous superficial ulcerations, and the infant, on the whole, appearing, as it were, in the jaws of death. I directed it to have one grain of calomel three times a day, and I endeavoured, at the same time, to bring the nurse's system under the influence of mercury. The treatment agreed so well, that, in seven or eight days, the crusts began to fall off the face, the ulcerations of the nates began to disappear, and the child's health became wonderfully improved. It is now nearly well. Here then is an instance of a child, only a few weeks old, taking one grain of calomel three times a day, and the mother subjected to the influence of the same remedy, which is not only borne easily,

but with the most striking advantage. You must not, however, conclude from my practice of giving calomel thus freely under urgent circumstances, that I am an advocate for its employment in these young persons on ordinary occasions. On the contrary, I have the strongest objection to its frequent use in early life, and would never employ it, except when its use is imperiously demanded.

There are two other questions connected with this subject. In what time is the calomel likely to affect the system? and how long will it be necessary to continue it? Calomel does, I am convinced, often act on the system of a child in seven or eight hours, if given in the manner in which I have employed it in these cases. This is a point of great importance to bear in recollection, for if you have reason to think that the child is capable of surviving the injury for eight or ten hours, you have an opportunity of trying the effects of calomel. With respect to the length of time this remedy should be continued, it is various;—two, three, or four days, according to circumstances; and I think it will be a good general rule to continue its administration as long as there exists any obstruction to respiration.

While I recommend calomel in these strong terms, I beg of you to remember I do not interdict the *judicious* employment of other remedies; you may bleed, you may blister, give tartar emetic, and endeavour to break down any vesications with the finger introduced into the fauces; but I repeat that upon these alone I place no reliance.

Treatment when Calomel fails.—Tracheotomy.—Use of a Canula.

But suppose that the symptoms of a case of scalded glottis are so alarming, that you are led to fear it may terminate in death long before the system can be affected by mercury; or suppose the calomel has been used, and it seems to have had no effect, what are you to do? Under such circumstances, I believe that all hopes of saving the patient's life depend on performing the operation of tracheotomy, nor should this be delayed too long. It is now, as I have already said, eleven years since I first performed this operation, and recommended its employment. Since that time other cases have been recorded in which the operation was performed, one by Dr. MARSHALL HALL and two by Dr. BURGESS of Clonmel. I have also to state, that the operation has been recently performed in this and in some of the other Dublin hospitals, with success, so that I may consider it as now established, that tracheotomy may be had recourse to in such cases, with a very fair prospect of a favourable result: indeed it is precisely a case suited to tracheotomy. The injury from the boiling water does not extend to the trachea; it only occupies, as I have already informed you, the upper part of the larynx and fauces, leaving the trachea uninjured, and hence, if we make an opening into the latter, respiration may be kept up by the artificial aperture, until the larynx is restored to its natural condition.

But though I strongly recommend the operation of tracheotomy in such cases, I must tell you that in children it is not an operation of very easy performance. From seeing it performed in the case of an adult, or on the dead subject, you might be led to conclude that it was very simple, but in the child this is not so; here it is different, and requires considerable caution. In the child the depth of the trachea from the surface is comparatively greater; it is also shorter and less developed; the thyroid and thymus glands are large; (I have seen one case in which the thymus gland was projected into the wound during the operation every time the child coughed;) and the space in which the operation can be performed is extremely limited. If you add to this the great restlessness of a child, and its incapability of moral restraint, you will have some conception of the difficulty of the operation, and you will not be surprised that the experienced PELLETEN should have found it to require so much caution and anatomical knowledge as to induce him to declare, that it should never be attempted, unless by men of science, coolness, and experience in operations. Let me not, however, discourage you; if you possess a perfect knowledge of the anatomy of the parts, and go through the different steps of the operation with caution, you need not fear the result.

CASE III.

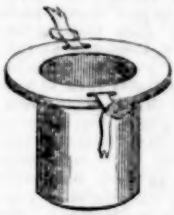
I shall now conclude the subject of this lecture by making a few remarks on the case of this child. (Here Dr. WALLACE introduced the little patient, a fine boy, apparently about two years of age.) I first saw this boy on last Sunday week about eight o'clock in the morning. He was then lying in ward No. 4, apparently insensible to surrounding objects; his countenance pallid and somewhat swollen; his eyes turned up, and his eyelids half closed; his pulse very rapid, and his respiration, which was 48 in a minute, extremely laboured, and accompanied by a wheezing rattle. The only muscles of his body which appeared to act were those of the abdomen and chest, but their action was extreme, and during every inspiration

a remarkable depression was formed at the lower end of the sternum. Mark, Gentlemen, these symptoms! They illustrate that variety of case, in which a state of insensibility rather than of restlessness succeeds the obstructed respiration. Upon making inquiry into the history of the case, I learned that the child had been brought into the hospital about twelve hours before I saw him, that is about eight o'clock of the preceding evening; that his respiration was then hurried and laboured; that his pulse was rapid; that his mother who carried him, reported that he had a few hours before gone to a tea-kettle, which was on the fire, and containing water nearly or altogether boiling; that he had taken some of the water into his mouth, but that, in her opinion, he had not swallowed it; that he immediately drank some cold water with avidity; that she had afterwards given him several pieces of fresh butter, and made him swallow oil, and that after this he had vomited three or four times. I was further informed, that eighteen grains of calomel had been administered in divided doses during the night, and a blister applied to the front of his neck, which, however, had produced no effect on the skin, except a slight redness, with two or three small vesicles; and, lastly, that his state was becoming gradually more hopeless. Under these circumstances, in fact, the child appeared dying. I determined to make an opening into the trachea without a moment's delay, and thus give the little sufferer his only chance of life. I, therefore, had him immediately placed on a table, with his shoulders elevated, and his head hanging a little backwards, with the light falling obliquely from above. Now standing to the right side, and in front of the child, I pinched up, with my left finger and thumb, at the anterior and lower part of the neck, a fold of integuments, about three-quarters of an inch broad. An assistant having taken hold of the other end of the fold, I divided it with the scalpel, in such a manner, that an incision was formed in the integuments of sufficient length (about an inch and a half) for the future steps of the operation, and situated exactly in the median line over the trachea and above the sternum. Let me remark, that I divided the integuments in the manner I have described, because I had found, in a former case, some difficulty, owing to the mobility of the parts in the neck and the restlessness of the child, in making the first incision in the proper manner, or exactly perpendicular, and in the median line. The division of the integuments exposed a stratum of adipose substance, seated in front of the trachea, and at the top of the sternum. This was next divided, and a thin fascia covering the sterno-larynxal muscles laid bare. Having now insinuated the point of a director into this membrane, and having divided it carefully, first downwards and then upwards, I laid aside the scalpel, and, with the end of the director, separated from each other, along the median line, the muscles covering the trachea, and gently pressed them to each side. The trachea being thus laid bare, I now introduced my finger into the wound, which was, at the bottom, about three-quarters of an inch long and an inch deep, to ascertain whether this tube was sufficiently exposed to sanction its being opened, and felt it under my finger exactly as you might expect the small denuded trachea of so young a child would feel. It was elastic, rolled under the finger, and felt so firm, and so free from pulsation, as to leave no doubt that it was bare. I now with a tenaculum (for I had no book nor any instruments save those of a pocket-case) perforated the trachea in the middle of the space, and gently raised it on the tenaculum, so high as enabled me to excise a portion of it with a pair of scissors. Air immediately rushed out of the wound, and the blood in the bottom of it was raised in bubbles. It seemed, however, advisable to enlarge the opening, and this was quickly done in the same way as the first had been made. The child now respired most freely through the wound, and instantly appeared much relieved, sat up, looked about, seemed to perform the muscular efforts of crying, but was unable to make any vocal sound. He was now carried to bed, drank with avidity some milk and water, and two grains of calomel were administered. I have to remark, that scarcely a teaspoonful of blood was effused during the operation, though I have no doubt that one or more very minute veins were touched with a scalpel, and also a pulpy reddish substance, which might have been either the lower edge of the thyroid or a lymphatic gland.

I have said that I directed two grains of calomel to be given. Let me explain to you why I continued this medicine after the child had been relieved by the operation. I need not inform you, that the operation could have but little effect in diminishing the inflammation excited in the glottis by the boiling water, nor will it be difficult for you to conceive, that if the inflammation continued, it might lead, notwithstanding the indisposition of mucous surfaces to the adhesive form of inflammation, to an effusion of lymph, and consequent union of the lips of the glottis. Now it is scarcely necessary to remark, that such an

event might render it impossible for the child ever to respire through the larynx, and thus lead to the necessity of a permanent fistulous opening of the trachea for the support of respiration. How serious such a consequence as this would be I need not observe; nor is a contingency of this kind merely ideal, for there are cases on record, in which individuals who have undergone the operation of tracheotomy, have been obliged to keep for years a tube in the artificial opening in the trachea, and I am much inclined to believe it possible that this unpleasant consequence may have arisen, in some at least of these cases, from a preternatural union of the lips of the glottis. Hence in all cases which require an opening to be made into the trachea, we must continue our attention to the patient with the view of removing the morbid states which may have rendered the operation necessary, and of preventing such consequences as I have described. It is, therefore, with the object of removing as quickly as possible the diseased state of the glottis, that I am induced on these occasions to recommend mercury after the performance of tracheotomy.

I have just said that the child was put to bed much relieved by the operation; but I have now to remark to you that the relief was not progressive; for having visited the child again before I left the hospital, perhaps three-quarters of an hour after the operation, I found that his respiration, though less laboured, had become much more frequent, and that his pulse, although possessed of considerable force, had become more rapid; on the whole, he seemed not likely to survive. "To what can this be attributed?" said I to myself. "Is the child sinking from exhaustion, or has his respiration become less free?" The strength of his pulse led me to reject the former supposition, and, upon examining the wound, I was induced to form the opinion that his respiration was not so free through the opening in the trachea as it should be. There was, certainly, a perpendicular opening down to the trachea, but this seemed to be obstructed too much to allow of a sufficiently free passage for the air. The soft parts had become swollen, the muscles had approximated too closely on the median line, and there was some oozing from the surrounding parts, which clogged the opening in the trachea. The flame of a candle when brought to the wound, was only slightly bent by the current of air which passed in and out. In short, it seemed indispensable that the parts over the trachea should be separated from each other, so as to make the opening in this tube more free. I now sent off for this canula (Dr. Wallace here showed the canula), which I had invented on a former occasion, for the purpose which I had now to fulfil, and from which I had then derived very great assistance. I have already told you that I had entered on the present operation on the moment, and that I had no instruments with me, except those of a pocket-case, otherwise I should certainly have at first used this canula. I now, however, rejoice that I had not employed it, for I was afforded, by the relief it gave the child, the strongest proof possible of its great utility in these cases. In fact, as soon as it was introduced into the wound, the child's breathing was very much relieved, and the current of air which then escaped from the trachea was sufficient to blow out the flame of a candle.



Before I proceed further, let me say a word respecting this little canula. You remark that it is about one inch long, that its pipe or area is of an oval form, measuring in its long axis three quarters of an inch, and transversely about half an inch. The shoulder, which is about one-fourth of an inch broad, is perforated at each side by a small slit, while the extremity of the instrument terminates by a blunt edge, which is slightly excavated from side to side. You prepare this instrument for use, by furnishing the slits, which are in its shoulder, with a bit of ribbon, and by arming the canula with a flange of adhesive plaster, attached in such a manner that the plaster shall be perforated by the canula, and that the shoulder of the latter shall lie on the former. To apply the instrument you pass it into the wound, so that its longitudinal diameter shall be parallel to the long axis of the trachea; that the edge of the canula, which is excavated from side to side, shall rest on the trachea, and in some measure grasp it; and that the shoulder of the canula shall, with the adhesive plaster, overlap the edge of the wound. You are then to fix the canula in its situation, partly by carrying the ribbon with which its eyes or slits are furnished behind the neck, where their ends are to be tied; and

partly by causing the flange of adhesive plaster to adhere to the skin surrounding the wound. Should the instrument be too long for any particular case, the part which enters the wound may be shortened by arming the canula with two or more flanges of adhesive plaster, or of lint, which will have the effect of preventing the instrument from sinking too deeply into the wound.

This instrument you observe differs from the canula commonly used in this operation, in being much wider, much shorter, and, when applied, in not entering the trachea, but in resting on, or grasping, the external surface of that tube. Now the offices which it serves are these; it effectually keeps the wound in the trachea from being covered or obstructed by the parts which are naturally over it; it prevents any oozing of blood from the surface of the wound from entering the trachea; it, with the assistance of the adhesive plaster, completely covers the incised surfaces, and prevents their exposure to the air; and, lastly, it affords very great facility in removing the secretions of the trachea, which are always discharged with difficulty, and which are sometimes very abundant. This last is an office which you will find to be one of great importance. Thus, it frequently happens, that the patient is not able, whether from weakness of the respiratory muscles, or from viscidity of the discharge, to expel it outside the cavity formed by the wound of the superincumbent parts. Whenever this is the case, the moment the effort of expiration is over, the discharge which lies in the bottom of the wound is again, by inspiration, drawn into the trachea, closes up, more or less, the opening in this tube, and irritates the parts so much, as to keep up a constant cough, or effort at expulsion.

I need not tell you the exhaustion and other evil consequences which must arise from this cause. Indeed, I find that Dr. Burgess has attributed the death of one of the two cases in which he operated, to the accumulation of the secretions of the trachea in the wound, and I have very little doubt that the same result would have happened in the very case we are now considering, had it not been for the care which was taken, and for the assistance afforded by this little instrument, which, by allowing of the easy introduction of a probe armed with lint or sponge down to the trachea, afforded an opportunity of removing the secretions as rapidly as they appeared. This office was intrusted to the father of the child, and I had great pleasure in observing the affectionate and persevering manner in which it was executed by him. For forty-eight hours after the operation, he did not move from the bed of his child, and with the end of a probe armed with lint, and passed by the canula to the wound in the trachea, he removed the secretion as fast as it appeared. Indeed, for many hours, he found it necessary to pass the probe down at the termination of almost every expiration, to clear away the secretion, for he observed that if this were not done, even for one respiration, cough and irritation were produced by the return of the discharge into the trachea, the child being quite unable to expel it from the wound, partly owing to his exhaustion, partly to the depth of the wound, and partly to the viscidity of the discharge.

I shall not now detain you with an account of the daily reports of the case; you have, when you please, access to them; but I would beg of you to note in a particular manner, when you peruse the report, these facts—viz. that the canula, being no longer necessary, was removed on the second day after the operation, the superincumbent parts having then become so agglutinated, that the wound remained perfectly open, and all oozing of blood having ceased; that on the fifth day the calomel was omitted, the child being playful, and free from alarming symptoms; that he began to respire by the natural passage on the same day; that on the sixth he was able to articulate some words; that the wound was closed with adhesive plaster on the seventh; that his voice was as perfect as before the operation on the eighth, although a small probe could be then passed by a minute fistulous opening into the trachea; that the wound was perfectly healed on the tenth; and you remark that its situation is now scarcely to be observed, except for a slight depression which appears at the part; nor indeed is there anything the matter with the child, save a very slight wheezing, audible when you attend closely to his breathing. This will probably continue for some days longer, and until it disappears entirely, we must closely watch our interesting little patient.

Salivation.—Iodine.—Dr. Graves has thus arrested profuse salivation:—"On the 20th of November I commenced the exhibition of iodine. That day he took three grains; on the 21st and 22nd together, eight; and on the 23rd and 24th sixteen grains; making, on the whole, twenty-seven grains in five days, when from nausea it was omitted. On the 26th it was resumed, and then, and on the 27th, he took eight grains more. On December 1st the salivation had wholly ceased.—*Dub. Med. Jour.*

HOTEL DIEU, PARIS.

CLINICAL LECTURES ON SURGERY,

DELIVERED BY

BARON DUPUYTREN,

During the Session of 1833.

Revised (before translation) by the Baron himself in the fasciculi of his "Leçons Orales de Clinique Chirurgicale," published periodically by G. Bailliere, Paris.

ON DIFFUSE PHLEGMON: ITS DISTINCTIVE CHARACTERS AND TREATMENT.

I HAVE often spoken to you, Gentlemen, in my lectures, of a species of phlegmon, to which nearly twenty years ago I gave the name of *diffuse phlegmon*, a designation since that time generally adopted by our surgeons. This affection, though of frequent occurrence, and often of a severe nature, has been completely overlooked by the greater number of authors; by some it has been confounded with the diseases complicating it, and it has been described by modern writers under the name of erisypelatous phlegmon, phlegmonous erysipelas, or traumatic erysipelas. Many authors have confounded it with phlebitis, inflammation of the lymphatic vessels, and various other affections. We have adopted the expression of *diffuse* phlegmon, to distinguish it from that species of phlegmon commonly called *circumscribed*. But what is the difference? It is only necessary to cast an eye on the phenomena presented by both affections, to render yourselves at once masters of the differential characters. Let us select an example of circumscribed phlegmon; you will see it at No. 12, in the Salle St. Martin.

CASE 1.—*Circumscribed Phlegmon of the Thigh.*

This patient, after some violent effort, was seized with pain in the upper and inner part of the thigh, followed immediately by redness, tumefaction, and tension of the part; these symptoms soon gave rise to symptomatic fever of a slight nature, and he presented himself at the hospital for reception. Having often remarked that slight excoriation of the leg or foot existing over the traject of the lymphatic vessels which pass up to the groin, has given rise to considerable inflammation, I was careful to examine those parts on my first visit; but finding nothing to which the existence of the inflammation could be attributed, I was compelled to admit an *idiopathic* phlegmon, that is, an inflammation developed under the influence of some local cause, whether external or internal, and strictly confined to the point of its existence. The skin was red, warm, tumefied, and tender, and the least pressure occasioned excessive pain; in fact, it was a perfect example of inflammation, as understood and described by the ancients. But you should observe, Gentlemen, that in all inflammations the degree of the disease varies; that in some cases one or more symptoms of phlegmonous inflammation are altogether wanting; in internal *latent* inflammations, there is no pain; and in inflammation of a serous membrane, especially of the arachnoid, we find little or no tumefaction, if we except some slight tumefaction of the cellular tissue near the affected membrane. When the phlegmon is circumscribed within a small space, as in boils, anthrax, &c., the fever is local, and does not often give rise to general symptoms; but if it be extensive, occupying the arm-pit or ham, a symptomatic reaction is set up, and the fever becomes general. The latter phenomenon is not absolutely necessary for the diagnosis of an external phlegmon, but when the inflammation is confined to internal parts, the reaction throws great light on the subject, although we are not to conclude from its absence that no inflammation exists; for, as I have before remarked in chronic inflammation, there is often no fever at all, or it is so marked as to escape observation. While speaking of this febrile reaction, it may be useful to remind you, that a peculiar kind of fever, which we call *traumatic*, usually succeeds certain surgical operations, such as the amputation of a leg or a thigh, &c., on the third or fourth day: this reaction may be readily distinguished when simple and isolated, but the difficulty of diagnosis becomes exceedingly great when it is accompanied, as often happens, by some internal inflammation, as a pneumonia, hepatitis, &c. When this internal inflammation does not produce any local pain, or is not disclosed by some well-marked symptoms, the skill of the medical attendant is at fault, and it becomes impossible to discover whether the fever depends on the operation, is produced by an internal inflammation, or is the result of both these causes acting together. It is true, that in a short time other symptoms appear, which reveal the existence of the internal affection, but then this disease is generally beyond the resources of our art. I have said enough, Gentlemen, to make you acquainted with the principal character of *circumscribed* phlegmon. To determine those of the *diffused* species, I shall again select one of the numerous

examples which you have seen in the hospital, and I shall then proceed to lay my ideas before you on the most important points of the subject.

CASE 2.—*Diffuse Phlegmon of the Left Leg.*

D'Amiens, 68 years of age, a washerwoman, remarkably fat, in falling, bruised her leg considerably, but without producing any external wound. The injured part was affected with slight pain, and a small circumscribed spot of redness made its appearance; these symptoms soon increased in severity; the whole leg became tumefied, constitutional fever set in, and the patient was brought to the hospital twenty days after the occurrence of the accident. At this period, the limb had acquired a very considerable size, the inflammation was violent, and the epidermis detached in several points; a dark eschar, two inches in extent, occupied the inner surface of the leg, at the junction of the middle with the lower third, round which, as well as at several other joints, was felt a manifest fluctuation. The eschar was divided and the abscess opened, giving exit to a considerable quantity of sanious fetid pus; a second opening was made above, which also discharged the same kind of fluid: when the soft parts were compressed, we could not notice any communication between the two abscesses. The limb was dressed and placed upon pillows. The patient was bled to a few ounces, and ordered a lavement, as she had been costive for several days. As she found herself somewhat improved in the morning, a warm-bath was administered; the eschar became detached on the fourth day, and formed a large opening, from which a great quantity of putrid pus was discharged. On the fifth day the disease became aggravated, and soon extended to the greater part of the limb, in spite of the frequent application of leeches.

In other regions of the body diffused erysipelatous inflammation often terminates in resolution, but in the extremities suppuration always succeeds the phlegmon, and it is a very dangerous termination, for the cellular tissue becomes destroyed, by the manner in which the pus is disseminated through the various cells; hence, when suppuration sets in, the gangrenous cellular tissue is detached in large masses. I have often extracted a portion, at least half a foot in length. At this period the pus becomes evacuated, but other phenomena appear; the thinned skin, being deprived of all nutrition, becomes blue-coloured, and soon dies, not through the effect of inflammation, but simply from want of nutriment. This consecutive gangrene of the skin is often seen in the lower extremities, especially the leg, where the nutritious arteries, the anterior and posterior tibial, and the fibular, being lodged deeply in the cellular tissue, communicate only with the skin by some delicate ramifications. This consecutive gangrene, Gentlemen, is very seldom seen on the head. Although diffuse phlegmon often exists in that region, yet its arteries are disposed in a very different manner; the temporal, frontal, and occipital arteries, situated between the skin and fascia, are so intimately united to the former, that it is not easy to separate them even in dissection. When inflammation attacks this region, it is constantly found to exist between the aponeurosis and pericranium. When suppuration takes place, if it be confined to the cellular tissue and has not injured the pericranium, the patient may recover; but its operation is mortal when the pericranium has been exposed or is injured. The integument, however, escapes injury, because the arteries continue to bring sufficient nutrient matter. Even if the whole cellular tissue which envelops the head were to be destroyed, the arterial communications with the skin would still remain. I can bring to mind only one case, which we saw about two years ago, where the skin as well as the cellular tissue became gangrenous.

4. The *causes* of diffuse phlegmon, Gentlemen, are numerous. It frequently is the consequence of venesection, even when the operation has been perfectly well performed, and the instrument clean. You will find examples of this affection described in the works of old authors, and I have had occasion to observe it myself more than once. The nature and cause of the accidents which sometimes succeed venesection have not been well understood until within the last few years. At one time authors attributed them to the puncture of a nerve; at another to the injury of some tendon or fascia. When the lymphatic vessels were discovered, the sole cause of all these disorders was attributed to the inflammation of that system; and, finally, some physicians regard phlebitis as giving rise to all the accidents which may follow venesection. When diffuse phlegmon is the result of that operation, the small opening made by the lancet sometimes closes up as it ordinarily does, and remains closed; sometimes it heals and then opens again; but in most cases cicatrization never takes place. The limb soon becomes enormously swelled, and the tumefaction may extend to the upper arm,

as far as the axilla, if it be not checked by means suited to arrest the inflammatory process. Sometimes the vein participates in the general inflammation, sometimes it is unaffected altogether. Let us select an example.

CASE 3.—*Diffuse Phlegmon of the right lower Extremity, following Venesection of the Foot.*

You have seen, Gentlemen, a young washer-woman, of 25 years of age, of good constitution, who had been received into the medical wards for a suppression of the menses. It was judged necessary to bleed her at the foot. The operation was performed, but, as I must confess, very clumsily; the lancet was plunged three times into the skin, over the external malleolus, without drawing blood. A pupil somewhat better instructed soon arrived, and opened the left saphena vein. The first cut made by the lancet had produced a good deal of pain, which persisted, and in ten days the foot became considerably tumefied; the swelling increased, and extended up the leg; the skin was red, warm, and tense; there was excessive pain, accompanied by burning fever and sleeplessness. Leeches were frequently applied in great numbers, the leg and foot were covered with emollients, cataplasms and warm-baths were ordered. But the inflammation continued to extend in spite of these means; it reached the knee; the whole leg was enormously swollen, and fluctuation could be felt in some points. In a very short time the whole lower extremity was inflamed, delirium came on, followed by sickness of the stomach, diarrhœa, and a morbid sensibility of the abdomen. In this state the patient was transferred to the surgical wards twenty days after the accident. We immediately drew blood from the arm, and made two long incisions on the dorsum of the foot, which gave exit to a great quantity of fetid, sanious pus; finally, a large deep incision was practised along the upper and inner part of the leg, where a considerable collection of pus also existed. This patient continued delirious during the whole night, and the vomiting persisted to the morning. (Twenty leeches over the epigastrium). On the third day the skin covering the dorsum of the foot became gangrenous, and the extensors of the toes were exposed. The delirium had ceased, but the patient was excessively feeble; she was still troubled by diarrhœa, and the thigh was the seat of the most intense inflammation and tumefaction. (Forty leeches to the thigh.) *Fourth day.* The fever was much diminished, the thirst moderate, and but little diarrhœa; but a fresh collection of pus was formed on the inner and lower side of the thigh, a large incision was made over the part, and a great deal of fluid discharged; the lips of this incision, as of the others before practised, were kept asunder with pledgets of lint, and the limb was enveloped in an emollient cataplasm. As the skin of the foot and leg became every day more extensively gangrenous, the question presented itself for our examination, whether we should amputate at once or not. But at what point was the operation, if practicable, to be performed? You have already been told that the disease extended up the thigh, which was the seat of purulent infiltration; besides, the fever was still very violent, and the diarrhœa persisted; these circumstances seemed to me to contra-indicate the operation, and my whole care was consequently directed to diminish the intensity of the accidents, to arrest the diarrhœa, calm the fever, and support the strength of the patient. These different indications were carefully attended to, and the limb dressed twice a day. But the inflammation did not seem to give way in any positive manner before the termination of six weeks; the extensor tendons were detached, and came away in the dressings; new skin began to be formed; the fever and diarrhœa had disappeared; we had thus reason to congratulate ourselves for temporizing,—for giving nature time to employ her resources, and thus preserving to the patient so essential a member. In about two months she had recovered her natural complexion and appetite; she slept well, and was free from all pain; the incisions of the leg and thigh had healed up, and the wound occasioned by the destruction of the integument was covered by a layer of fleshy, vascular, granulations. The dressing was now confined to the application of some charpie, and compresses, and the patient was strictly enjoined to avoid all motion which might tend to break up the new-formed cicatrices. The exuberance of the granulations was checked by the application of nitrate of silver every three days. Near the end of the third month, we noticed a small purulent collection over the external malleolus of the right foot; this was opened, and healed in eight days; in a short time the secretion of the menstrual fluid was re-established, the health of the patient made rapid progress, and she left the hospital, though still unable to make much use of the foot.

Having thus explained the unfortunate consequences of venesection, let us return to the causes of diffuse phlegmon. The liga-

ture of a vein may also give rise to this affection, and in that case, as in the former, the vein may either be inflamed, or free from any disease. Diffuse phlegmon is one of the most frequent accidents determined by the application of a morbid principle to the skin or cellular tissue; an accident to which all those who open bodies or dissect much are peculiarly exposed. In some rare cases, the phlegmon is neither accompanied by inflammation of the lymphatic vessels, nor engorgement of the glands in the axilla; however, tumefaction of those glands, redness of the skin along the direction of the lymphatic vessels, and pain situate in the same region, are the symptoms which we observe most commonly. Excessive fatigue, produced by a long forced march, is also a very frequent cause of diffuse phlegmon; and in that case the disease becomes so intense, is accompanied with such dangerous symptoms, that death almost invariably results. This severity depends on two causes; one local, the other general; viz. the fatigue of the lower extremity, and the exhaustion of nervous force by the prolonged action of the muscles. Persons affected with comminuted fracture, especially when the accident is occasioned by a gunshot wound, are very subject to consecutive inflammation of the parts surrounding the fractured bone; this inflammation often assumes the character of diffuse phlegmon: we also observe this species of inflammation as a frequent consequence of capital operations, as a complication of various wounds, and particularly of burns; it is also occasionally produced by the application of acrid matter to the cellular tissue, and of topical remedies, apparently little irritating to the skin. Thus we have seen it succeed to the application of an ammoniated liniment over leech-bites. Numerous observations prove that it may be developed by a slight prick, a small wound, independently of poisonous or morbid principles, by the bite of a venomous animal, by any considerable muscular effort, &c. Finally, in some cases, diffuse phlegmon appears spontaneously, without our being able to assign any cause for the existence of inflammation. Let us illustrate the principles now laid down by some facts.

Case 4.—*Extensive deep-seated Phlegmon of the Left Upper Extremity, produced by a bite on the Little-Finger.*

Boyer, a mason, 27 years of age, while playing with one of his comrades, threw him on the ground; the latter became angry and bit the little-finger of his friend rather severely, producing much pain and the loss of a good deal of blood. The pain persisted, and on the following morning the hand became much swollen; the tumefaction quickly extended forwards to the forearm. Ten days afterwards, when the patient entered the Hôtel Dieu, we found the left arm swollen to double the size of the other; the skin was warm, painful, and very tense. On the anterior surface of the little-finger we found a small transverse wound, which had divided the skin, cellular tissue, and the tendinous sheath, and which discharged a small quantity of whitish pus. An obscure sense of fluctuation was felt in the palm of the hand. We practised a longitudinal incision in this part, and gave exit to a great quantity of purulent fluid. The limb was now placed, demiflexed, upon a pillow, and covered with emollient cataplasms. Beside the local symptoms there was violent fever, the pulse was rapid, the breathing hurried, the skin hot, and the face animated. (Bleeding from the arm, cooling draught, strict diet.) On the eleventh day after his accident, the second of entrance into the hospital, the patient felt much better; the general symptoms were alleviated; during the night a spontaneous opening was formed on the ulnar edge of the hand; but as the upper part of the forearm still remained tense and painful, thirty leeches were applied to that part. On the fifteenth day we noticed a well-marked fluctuation near the head of the radius; the abscess was opened by a large incision, and the edges of the wound separated by charpie; the fever had now completely disappeared. On the eighteenth day we remarked with regret that the patient was affected with some colicky pain and a little diarrhœa, a complication always dangerous in this sort of case. (Emollient lavements; in each eight drops of laudanum.) In eight days the symptoms of intestinal irritation had disappeared, but the inflammation continued to extend, and we were compelled to make an opening on the inner side of the arm to give exit to the purulent matter. Shortly after a second abscess was opened on the forearm, and from that period the patient's health rapidly returned, and his cure was complete in less than two months after the accident.

Case 5.—*Diffuse Phlegmon of the Right Upper Extremity, produced by the introduction of a Thorn into the Middle-Finger.—Spontaneous Diffuse Phlegmon of the Lower Extremity.—Death.*

Renant, 47 years of age, but presenting all the appearance of premature old age, accidentally introduced a thorn into the middle-finger. She was unable to explain

clearly the phenomena which succeeded, but it appeared that the finger became swollen, that the tumefaction soon extended to the hand, forearm, and arm, and that symptoms of gastro-intestinal irritation set in. At the period of her entry into the hospital, three weeks after the occurrence of the accident, the whole of the right arm was three times larger than in the natural state; the pulse was rapid, the skin dry and warm, the tongue dry, and the abdomen painful upon pressure. The dresser on duty immediately drew blood from the arm, and covered the limb with a poultice, and in the morning forty leeches were applied to the most inflamed part. On the fifth day the patient for the first time complained of a pain in the knee. On examination we found it much swelled with fluctuation, but the skin was not discoloured. (Twenty leeches and poultices.) On the seventh day abscesses opened on the hand and along the lower extremity of the ulna, denuding the bone. The tumefaction of the arm was much diminished, but that of the lower extremity had increased and extended to the thigh and calf of the leg. The gastric symptoms also became more intense; the head was attacked, and the patient died on the ninth day in spite of the most active measures.

The facts I have related have given you an idea of the characters of diffuse phlegmon, of its danger, progress, termination, and the treatment which is adapted to it; but it is our duty to enlarge a little on these different points, and this I shall do on an early occasion.

ON THE USE OF

WHITE MUSTARD-SEED

FOR THE PRESERVATION OF HEALTH.

By the Right Hon. SIR JOHN SINCLAIR, *Bart.*

SIR,—Having had great experience in the use of white mustard-seed, and finding it, under a proper system, highly beneficial for the preservation of health, I am induced to draw up a short account of the plan I have pursued, to be inserted in THE LANCET, as the most likely means of rendering the mode I have successfully adopted, generally known. The plan of taking an aperient pill at night is, I am convinced, of great importance in promoting the success of the remedy. I remain, Sir, your very obedient servant,

JOHN SINCLAIR.

George St., Edinburgh, Dec. 20, 1833.

I am not descended from long-lived ancestors. My father and grandfather died about the sixtieth years of their age; and I cannot ascertain that any of my ancestors reached the age of seventy.

About thirty-six years ago (an. 1797), my health became extremely indifferent, I little expected to survive long. I derived some benefit from the advice of several eminent British physicians, whom I consulted at various times, but I did not experience that flow of health which was likely to ensure longevity. I resolved, therefore, to study the subject thoroughly; and with that view made a collection, to the amount of several hundred separate publications, of all the most valuable works, both ancient and modern, that had been printed on health. Th,se, when likely to be of use, I carefully examined. I likewise amassed, from conversation and correspondence, a number of valuable observations from intelligent friends; and anxious that so much important information should benefit others as well as myself, I resolved to publish a work on the subject, to which I gave the name of "The Code of Health and Longevity," which I have reason to believe has effected much good.

In the course of my inquiries regarding the subject of health, I was much struck with the information I received at Paris in 1816, regarding the use of *white mustard-seed*, to which Monsieur Jurine, an eminent professor of medicine in Geneva, had given the name of "The Elixir of Life." I have ever since made use of this grain at meals, with astonishing success; and having experienced the good effects of the regular use of mustard-seed, for such a number of years, I feel it a duty incumbent upon me, not only to recommend it in general terms, but also to point out the specific means by which it may be employed with the greatest advantage.

To persons under sixty, the constant use of white mustard-seed is rarely necessary; and, at that age, it may be sufficient to begin with taking at dinner, *a tablespoonful* with some broth or soup, for it must be used in a moist state, swallowed whole, and not crushed or pounded. When thus taken, it greatly promotes the expulsion of the feces. It is, however, not generally known, that mustard-seed alone cannot be depended on for the attainment of that object, without the addition of an aperient pill at night.*

* The following is the receipt for the pill recommended:—Take of *Aloes* (Succ.) two drams; of *Gamboge* and *Spanish Soap*, each a dram and a half. Mix them thoroughly with a sufficient quantity of syrup, and divide the mass into fifty-four pills, one to be taken regularly at bed-time, and

When age advances and health decays, more especially after seventy, it may be necessary to take another tablespoonful of the seed at breakfast, with a little tea or coffee. To the adoption of this system, thus increasing the quantity as age advances, from one to two tablespoonfuls per day, I attribute the excellent health I have enjoyed for such a number of years.

It may be proper also to observe, that mustard-seed, by strengthening the stomach, and producing beneficial effects on its contents, tends greatly to prevent calculous complaints; and, in this respect, its use is peculiarly advisable in a thick atmosphere, mingled with all the impurities to which the inhabitants of London and other large towns are liable.

I have thought it incumbent upon me to communicate these particulars to the public, as the result of long experience regarding a practice which I have found peculiarly advantageous; and I have no doubt that persons having no constitutional infirmity may, by the means above recommended, preserve their health for many years, unless they are very careless in regard to diet, and neglect taking regular exercise. At the same time, in modern times, the hours for meals are so irregular, the food taken is so unwholesome and so improperly dressed, and the atmosphere so impure, that an entire exemption from disease can hardly be expected. When disease, however, does take place, a person ought to consult some skilful physician, and not trust to the trifling remedies which are frequently prescribed on such occasions. The advice of those who have made a study of the art, and who have seen disease in all its various forms, must be much more effectual than the suggestion of persons, who have not had the same means of acquiring medical knowledge, and yet pretend to cure disorders, with the real nature of which they are totally unacquainted.

It may be proper to add, that with some persons mustard-seed does not agree. The gastric juice in the stomach is occasionally of so powerful a description as to dissolve the mustard-seed, in which case an acrid matter is produced, which is in the highest degree pernicious. Unless the seed, therefore, is expelled entire, and in a great degree *undissolved*, it ought not to be made use of.

Nothing but a deep conviction of the numerous advantages which may be derived from these hints, sanctioned by the continued experience of sixteen years, would have induced me to hazard their publication. But the successful attention I have paid to this subject, and the great benefit I have obtained from the practice, I hope will plead my excuse; and I trust that those who may derive advantage from the measures above recommended, will spread, as much as possible, a knowledge of them.

They come recommended by the experience of one who is in the *eightieth year of his age*, who is still in the possession of all his faculties, and who is now engaged in a most laborious literary undertaking (the preparation of a Code of Political Economy), which, without the possession both of bodily health and of mental vigour, he could not have attempted.

occasionally, if necessary, one and a half, or even two. The regular use of this pill is the means by which the use of mustard-seed is brought to a state of great perfection. If costiveness continue, the addition of fifteen grains of calomel to the mass may remove that complaint.—J. S.

ON CERTAIN SOURCES OF

ERROR IN TOXICOLOGICAL SEARCHES FOR ARSENIC,

And on the Precautions to be adopted for obviating them.

By ROBERT VENABLES, *M.D., &c. London.*

TOXICOLOGY is so important a branch of science and jurisprudence, that no means should be neglected of discovering causes of error or embarrassment in its application, and of tracing them to their source. I am induced, therefore, to detail the particulars of the following case, in order to prepare junior practitioners in this department, against deception or doubt under similar circumstances, and in the hope that should similar sources of fallacy occur, they may, in some measure, be ready to obviate them by being acquainted with their nature.

On Saturday, the 11th of January instant, I was requested by two gentlemen, surgeons, of my acquaintance, to assist them in the chemical examination of a certain fluid which had been ejected from the stomach in consequence of the administration of an emetic of sulphate of zinc, which had been exhibited under a suspicion that the patient had swallowed arsenic.

The case was that of a young woman, between 19 and 20 years of age, who had been chidden in the course of the day for some act, and who in the course of the following night was seized with severe vomiting, &c. The surgeons who attended were not informed of the nature of the case till they arrived at the house; and it being

between two and three o'clock in the morning, some time elapsed before the sulphate of zinc could be procured. The patient had vomited spontaneously several times before professional assistance was obtained; but the floor had been washed on their arrival, and, consequently, none of the spontaneously ejected matter was preserved. It was the matters ejected with the emetic that now underwent chemical investigation. The whole of the matters were well boiled, and as there was abundance of fluid, there existed no necessity to add any menstruum. Before boiling, the reagency was strongly acidulous, and it was, therefore, rendered alkaline, the more effectually to secure the solution of the arsenic. This also secured the precipitation of the oxide of zinc, combined with the sulphuric acid in the sulphate, and as there was very little animal matter present, after due boiling and filtering a transparent colourless fluid was obtained. This was now acidulated with distilled vinegar, procured on the moment from a neighbouring shop. A current of sulphuretted hydrogen was then passed through the fluid thus acidulated, and a yellowish-white faint muddiness was produced. This, viewed in a certain way, by transmitting the light directly through the medium, might have been readily mistaken by unpractised persons for the lemon-yellow characteristic of a very weak solution of arsenic. However, when viewed by reflected light, persons moderately acquainted with the subject could not have been mistaken. I felt satisfied that the disturbed appearance could not have arisen from the sulphate of zinc, because the whole of that metal being disengaged and precipitated by the alkali, was retained on the filter; therefore the only other source was the fluid. As the distilled vinegar was obtained under ordinary circumstances, I suspected the vinegar to be that source. Vinegar is very often sharpened by some of the mineral acids, especially the sulphuric, which would cause a precipitation of sulphur from the decomposition of the sulphuretted hydrogen. The sulphuric acid may be discovered by any soluble salt of barytes, by which sulphate of barytes precipitates. A small quantity of this precipitate, mixed with charcoal, and urged with the blowpipe, is reduced to a sulphuret, and the addition of a drop or two of muriatic acid evolves sulphuretted hydrogen, which may be known by the odour. But vinegar is sometimes sharpened by some of the other mineral acids. The muriatic may be detected by nitrate of silver, and the nitric by the addition of potass, so as to saturate, evaporating to dryness, and then treating the dry mass with concentrated alcohol. If nitric acid is present, it will be left behind, as nitrate of potass, which, being insoluble in the menstruum, may be recognised by its deflagrating properties. In the present case sulphuric acid was found in small but sufficient proportion to account for the turbidity.

But let us suppose arsenic to have been present in very minute quantity. It may then be asked, "How should the toxicologist proceed?" I cannot perhaps do better than state the plan I pursued on this occasion, leaving it to those who have a better mode to make it known.

The fluid being boiled to expel all excess of sulphuretted hydrogen, was rendered strongly alkaline by means of caustic ammonia. The liquor which still remained turbid was filtered. If any disguised sulphuret existed in the fluid, it is evident that it would be dissolved by the ammonia, and would pass through the filter. The fluid was now concentrated to about one-third by gentle evaporation; therefore if any arsenic had been present, it must have been held in solution by the ammonia, and the addition of any acid, so as to saturate the ammonia, would precipitate the sulphuret, so as to give the lemon yellow. But no indication of the kind was observed, even on evaporation to dryness; and on fluxing the residue with black flux, no metallic sublimate of arsenic was obtained. Therefore no arsenic was present. The precipitate separated by the filter proved to be sulphur. On being burned, sulphurous acid gas was apparent. Deflagration with nitre, and the product dissolved in distilled water, gave indications of the presence of sulphuric acid, on the addition of acidulous nitrate of barytes. The barytic precipitate, mixed with charcoal, urged with the blowpipe, and treated with muriatic acid, gave indications of sulphuretted hydrogen, not only by the smell, but by the effect of the gas upon paper moistened with a solution of acetate of lead. So far therefore as the inquiry has thus gone, there were no indications of poisoning. But the patient was seized with vomiting at about 11 o'clock at night, and either felt no pain or would complain of none. However, one of the surgeons on pressing the epigastrium perceived that she endeavoured to avoid the pressure, as if from pain. She refused to take anything till threatened with a strait-waistcoat, and died at three p.m. on the following day, having survived about twenty-eight hours.

An inquest was held on the body. It appeared however that a wine-glass was found in her room, in which there had

been a fluid, which it was supposed she had swallowed. In the bottom of the glass was a tolerably large quantity of white powder. This powder on examination had a strong smell of porter, and seemed to be in some degree coloured by the fluid. A portion of it put into a test tube with pure charcoal, on being carefully heated, evolved metallic arsenic, recognisable both by the characters of the sublimed crust, and the garlic odour. Dissolved in water and treated by sulphuretted hydrogen, sulphuret of arsenic precipitated.

Such are the circumstances of this case, so far as the medical inquiry goes. A verdict of "insanity" was returned. However, while on the subject, it may be as well to ascertain whether the medical investigation was sufficient, and how far it would enable the witness to ass'st the jury. I have no hesitation in declaring it to be wholly insufficient, for the medical witnesses were no better qualified than the jury themselves to decide the cause of death, for evidence could only be given on presumption, and that presumption was by no means sufficient for the formation of a medical opinion.* The absence of pain, or the manifestation, at least, of but a very slight degree of it upon pressure of the epigastrium, is not very characteristic of poisoning with the irritants, especially arsenic. Therefore the whole case rests upon the existence of arsenic in the glass. But, as the matter first ejected from the stomach was disposed of, and possibly might have contained arsenic, yet as it was not available for the purposes of inquiry, the fact amounts to nothing. Arsenic not being detectable in the matters ejected by the operation of the emetic, the case was rendered more doubtful and intricate, instead of elucidating any valuable fact. What, then, ought to have been done to render this inquiry perfect? Unquestionably an anatomical examination of the state of the viscera, and a chemical investigation of the contents and tissues of the same parts, should have been instituted. If inquests are mere matters of form, the inquiries were far more extensive than necessary; and, under such circumstances, the trouble and expense of instituting them should not be imposed upon persons who probably could make a better use of their time. But if, as I apprehend, they are solemn investigations, instituted to develop the circumstances of mysterious or sudden death, then I think no inquiry should be omitted which is calculated to elicit facts, and to enable us to come to specific and certain conclusions.

It may be urged that perhaps from the general evidence the jury felt satisfied on the subject. I question very much whether they ought to have been satisfied. A new inquest ought to be, and no doubt could be, directed to enforce inquiries which are essential to perfect the previous investigation. It is time that both the law and the custom in these matters were revised, and the duties of both coroners and jurors rendered more explicit. A certain degree of authority, independent of the inquest, should be made to invest medico-legal inquirers.

London, Jan. 16, 1834.

P.S. I need hardly observe here that the method proposed by me some time since in the *Medical Gazette*, of deflagrating with potass, and then precipitating by nitrate of silver, would obviate the above sources of error. For the details, the reader is referred to my paper, as above, or to the second edition of Christison's work on Poisons.

* I do not hesitate to make these observations, because no blame attaches to the medical inquirers, of whom I may reckon myself one, for they were desirous of further investigation.

CASES ILLUSTRATIVE OF THE

REMEDIAL POWERS OF IODINE

IN STRUMOUS AFFECTIONS.

By CHARLES ROBERT BREE, *Esq.*, *M.R.C.S.L.*, *Bildeston.*

IODINE has borne the test of minute examination, and it has been found worthy of great confidence on the part of medical practitioners, in many disorders, affording at the same time reason to believe that their expectations will be realized in its application to other forms of disease,—more particularly when its physiological action is better understood. The numerous cases in which I have seen iodine evidently correct the strumous habit, incline me to believe that it is as specific in scrofula as mercury is in syphilis, while it is evident that their sanative effects are equally observable in many other affections. As the subject of its remedial powers, though already much descanted on, is still one of great interest, I beg to offer the following cases as my testimony to some of its merits.

CASE 1.—Sarah F., æt. 17, of low stature, with dark hair and eyes, and fair skin, has been affected with a scrofulous enlargement of the glands on both sides of the neck, ac-

companied by strumous ophthalmia of the right eye, for the last three years. She resides with her parents, who are both of scrofulous habits, in a low, damp, and extremely dirty situation. Her catamenia have appeared once only, and that about eighteen months ago. The swellings have increased since that time.

March 29th. Capiat *Pil. Rhei C.* gr. x, alt. nocte, h. s.

Capiat *T. Iodinæ*, ɱ v, ter die quaque, et donec gradat. crescente ad ɱ xxx; et applic. part. affect. *Ung. Hydriodata Pot.* 3ss, nocte maneque.

April 14th. The tumours are much reduced in size, and one is softer. She complains of pain in the lower part of her body and right side. Discontinue the tincture for a short time. Continue using the ointment and the pills.

21. The pains are gone; the swellings are gradually decreasing in size.

Capiat *Tinct. Iodinæ*, ɱ x, et cont. alt. remed.

30. Is much better. Pergat.

Sept. 1. She has, with slight intermission, as occasion required, persevered in the use of the remedies prescribed, and is now quite well. The catamenia have appeared, the ophthalmic affection is quite well, and the glands are reduced to their natural state. Her health generally is very good.*

Case 2.—Emma R., æt. 6, of florid complexion, light hair, and blue eyes, the child of a respectable tradesman, has been affected for several months with enlargement and induration of the glands on the left side of the neck. She complains of weakness in her eyes.

April 19. Capt. *Hyd. c. Cretæ*, gr. vj. Alt. mane; et applic. part affect. *Ung. Hydriod. Pot.* nocte maneque.

31. Much better. Pergat.

May 7. The tumours are much softer, and evidently less in size. Pergat.

20. Quite cured.

Case 3.—P. P., æt. 20, a labourer, of light complexion and hair, has been affected with scrofulous enlargement of the left ankle-joint, more or less, for nearly a year. It is attended with unremitting pain, which is more violent after sitting. He has been cupped and blistered without relief.

April 20. Ordered to rest the leg as much as possible, and to rub it for an hour every night and morning with the following:—

℞ *Lint. Saponis, Spt. Camph.* aa., 3vij;
Tr. Iodinæ 3ij;
Capiat. *Pil. Cocciæ c. Cal.* gr. x, pro re nat. h. s.

April 25. The pain is *much less violent*, but there is no appreciable difference in the size of the joint. Pergat.

May 1. The joint is evidently reduced in size; he says that he is much better, that the pain at night is gone, and that he does not suffer much in walking. Pergat.

May 8. Is very considerably better, and he has gone to work. In a few weeks, by steadily following this mode of treatment, he was quite cured. I increased the quantity of tinct. of iodine to 3iij. It produced a slight blush upon the skin, and its good effects are, doubtless, due to the slight but effectual counter-irritation which it kept up. The abatement of the pain was, in this case, rather remarkable. I have since used the same liniment in cases of deep-seated pain, with uniform and complete success.

Case 4.—Mrs. D., æt. 40, married, of a spare habit of body, light complexion and hair, has been affected with scrofulous ulceration of the leg for the last seven years. The veins below the ulcer are in a state of varix; the leg is tender to the touch, and is very painful at night. She can only walk with great difficulty. This patient, also, *never menstruated*, but has been the subject of leucorrhœa for many years. Her leg had been strapped and bandaged without benefit. I adopted the same mode of treatment as in the former case, changed the dressings regularly twice a week, and ordered,—

Dec. 8. *Tr. Iodinæ*, gr. x, ter die, dosi grad. crescente ad gt. xxx.
Pil. Rhei C. gr. x, pro re nat. h. s.

By steadily pursuing this plan of treatment for about two months, the leg was completely cured. She bore the full dose of iodine very well, and with evident benefit. I inserted an issue in the leg, to prevent a recurrence of the disorder, and she is now quite well.

Case 5.—Mrs. B—, married, but without having any children, has been affected for the last three years with a large ulcerated surface, extending completely round the right leg, just above the instep, and as high up as the middle of the calf. The veins of the leg are completely varicose. There is a disagreeable sanious discharge

* In the same tenement there reside upwards of thirty individuals,—one-half at least of whom are affected with scrofula, half-starved, and half-clothed. How can our poor escape from disease and its consequences? It is painful to behold the pale faces and emaciated forms of the unfortunate victims of poverty.

continually taking place from the ulcers, and the integuments are much inflamed and indurated. She is quite lame, and in constant pain, and she states that the disease is extending upwards. Her catamenia are regular, and her general health has not suffered much.

Nov. 9, 1832.—Ordered to have the leg strapped with adhesive plaster, and a roller applied from the toes to the knee; the dressing to be changed twice a week.

Pil. Aloes C. gr. x, pro re nat. h. s.;
Tinct. Iodinæ, ℥ v, ter die, dosi gradatim crescente ad ℥ xxx.

Dec. 26.—The treatment ordered has been strictly persevered in, and she is at this date quite well. The ulcers have gradually healed, and the inflammation and induration have entirely subsided. The veins are restored to their normal condition. Ordered to wear a laced stocking.

Sept. 29, 1833.—About a fortnight ago, this patient applied to me again, with a slight ulceration in the same leg, she having imprudently left off the use of the stocking. I have applied the strapping without the iodine, but the disease continued to increase. I have lately commenced again with the iodine, and the case is doing remarkably well.

Case 6. — Mrs. B., of Finborough, ætat. 23, married, and the mother of one child, which she is suckling; has been affected, more or less, the whole of her life with scrofulous enlargement of the glands on the two sides of the neck. Complains of pain from a carious tooth on the *left* side, which I extracted, and ordered the following:—

April 10, 1833.—*Pil. Aloes C.* gr. x, pro re nat. h. s.;
Tr. Iodinæ, ℥ v, dosi gradatim crescente ad ℥ xx; utatur embrocatio iodinæ* nocte maneque.

26.—The tumours are much softer, and evidently decreasing in size. Pergat.

May 6.—I extracted another carious tooth from the *right* side. Bears the increased dose very well, and with marked benefit. Pergat.

June 15.—The tumours are at least one-half their original size. The iodine has occasionally produced headach and nausea, which have disappeared by discontinuing its use for a short time. Pergat.

I have not seen this patient since the last report, but the benefit she derived was so decisive, as to leave little doubt on my mind that she is now well.

There are some who cannot bear the medicine at all; but those cases must be referred to a peculiar idiosyncrasy which often opposes the action of medicinal agents.

I have used the medicine extensively, and have never found any bad results ensue. As to its alleged power of producing absorption of healthy glandular structure, I must confess I have never seen an instance of the kind. In relieving deep-seated pain, the embrocation which I use (and the formula of which I have given) I have found uniformly successful; in enlarged bursæ mucosæ, I have found its use equally gratifying and successful. In such cases, I refer its *modus operandi* to the gentle counter-irritant effect which it produces and keeps up.

Bildeston, Suffolk.

* For formula, see case 5.

ON THE

TREATMENT OF GLEET.

By J. W. Macnee, *Esq., Surgeon, Glasgow.*

I consider a gonorrhœa as having terminated in gleet, when the discharge continues, whether purulent or not, should the pain in making water have ceased. Very frequently the patient applies to us when in this state. The discharge, probably, during the day, has every appearance of mucus, and it is only on awakening in the morning and compressing the urethra, that a small quantity of pus makes its appearance at the orifice. Should the complaint have been of long continuance, I think it in every case prudent, before proceeding to any plan of treatment, to pass a bougie along the urethra, to ascertain whether or not the discharge may not possibly depend upon stricture. Having satisfied myself in this respect, I have for some time past been in the habit of ordering the patient the following mixture; but I must confess that, from its extremely disagreeable taste, I do not always succeed in inducing him to continue it for the requisite time.

℞ *Balsam Copaiv.*,
Olii Terebinth., a a ʒiss;
Tinct. Lyttæ ʒij;
Tinct. Muriatis Ferri ʒiiss;
Mucil. Gum. Acac. ʒiv. M.

Of this a tablespoonful to be taken at bedtime.

During the last twelvemonths I have had a considerable number of cases of gleet under my care, and, except in one instance, the discharge has always been arrested by a few doses of this mixture.

In no case, except in the one alluded to, have more than six spoonfuls been necessary. It sometimes occasions considerable nausea, but after perseverance for a day or two, that inconvenience frequently disappears, or, at all events, is very much mitigated. Strangury to a slight extent is not unfrequently produced, but is by too many to be regarded as an unfavourable symptom. The medicine, however, in the event of strangury becoming severe, may be omitted for a day or two, and afterwards resumed, during which it may be necessary to give small and repeated doses of the carbonate of soda or supertartrate of potass, in common gruel, or linseed tea, until the irritation of the urinary organs has subsided. This treatment usually answers sufficiently well. In some cases it may be necessary to give the mixture without the cantharides; but this I have only found requisite on two occasions. A Seidlitz powder, or a teaspoonful of the sulphate of magnesia, may be taken in the morning before getting up, should any feeling of nausea remain, and fifteen or twenty drops of laudanum may be advantageously added to each dose of the medicine, provided it has had any tendency to purge. Attention at the same time should be paid to diet. The food should be plain and plainly dressed.

Six doses will, in general, be sufficient to arrest the discharge, but in order to prevent a relapse, the *Terebinth e Chio* pills should be afterwards taken for at least eight or ten days. Four grains of turpentine, with a quarter or half a grain of the cantharides will be sufficient, taken three times daily, before meals. During the whole period abstinence from wine and venery must be strictly enjoined.

I have just now before me the notes of eleven cases of gleet, treated in the way I have ventured to recommend, within the last four months, and out of the eleven, ten were cured in less than six days. Of these cases, some were of ten and twelve months' standing, and one of two years and three months' duration. In one gentleman with whom the discharge had continued for nine months, and who had taken, before he applied to me, large quantities of capivi and cubebs without receiving any benefit, three doses effectually stopped the discharge. I was desirous in this instance that the patient should persevere with the medicine for a few days longer, but it occasioned such extreme nausea, that no persuasion could induce him to continue it any longer. He consented, however, to take the *Terebinth e Chio* pills in the form I have already mentioned, and has been so fortunate as to escape a return of his complaint.

In one very troublesome case which I had lately an opportunity of observing, strangury occurred, and continued very troublesome for two days. A nocturnal emission took place, along with which there was passed a considerable quantity of blood and pus. A dull obtuse pain had been for some days previously experienced behind the bulb of the urethra. A bougie was passed daily for some weeks, and latterly smeared with the *Unguentum Hydrarg. Nitrat.* Under this treatment the patient has recovered, after his complaint had for months resisted nearly every remedy. The abscess which took place in the urethra was, I have no doubt, caused by the irritation of the medicine.

DISCOVERY OF

A LARGE EGG-CUP

IN THE

ILEUM OF A MAN.

By Walter C. Dendy, *Esq., M.R.C.S.L., Stamford Street, Blackfriars.**

The case which I am about to relate is one of some pathological interest, which I at one time thought to have presented to the Society as a peculiar case of hernia, but which, during dissection, displayed circumstances which render it a physiological curiosity of no common kind.

—— Adams, a man 60 years of age, had been afflicted with inguinal hernia 25 years, which, although very frequently descending into the scrotum, had never been strangulated. Three months previous to his death he laboured under diarrhœa, which terminated in dysentery, from which he was partially relieved. Three weeks before his death intense abdominal pain was felt, with retching, &c., the pulse being 95, and rather full. The inflammatory action was diffused, and no particular uneasiness was referred to the hernia, which was apparently reducible. Leeches and the antiphlogistic plan restored the patient to comparative ease. About a week subsequent to this the acute symptoms returned, with other signs, indicating strangulation or obstruction,— such as stercoraceous vomiting and singultus, tumefaction of the abdomen, &c.—*the bowels however repeatedly ejecting very scanty fluid evacuations.* On minute examination I discovered a very small knuckle of intestine deeply situated, which appeared to be

* The case here related was read before the London Medical Society, December 16th, 1833.

intimately adherent to the mouth of the sac. As there was in this tumour extreme tenderness, I did not hesitate, after a brief endeavour to return it by the taxis, to propose an immediate operation. The friends consented, but the patient refused, stating no reason but that he did not like to be cut. I therefore contented myself with palliative means, having by repeated gentle pressure returned the knuckle to the mouth of the sac, after which the stercoraceous vomiting ceased. He sunk gradually, the abdomen becoming more and more distended, and on the 4th of December he died at three p.m., without having at any time during his illness made the slightest allusion to the circumstance, which was eventually proved to have been the essential cause of his severe disorder.

I examined him on December the 5th at 11 a.m., in the presence of Mr. Stephens, Mr. Brown, my brother, and two other gentlemen.

The coats of the tumour were adherent, forming one extremely thin covering; there was no intestine or omentum in the sac, the lining of which was converted into a pulpy mass, and contained a small quantity of dark grumous fluid. The hernia was oblique, but, by the close approximation of the rings, had appeared to be *direct* during life, as is often seen in very old herniæ. The intestine (a fold of the ileum) was adherent to the neck of the sac. On opening the abdomen the small intestines were seen much distended and discoloured, and on turning the superior folds aside, my finger came in contact with a hard substance which projected through the coats of the intestine. This intestine was the cross-fold of the ileum, and on further examination we were astonished to discover, through its attenuated coats, an earthenware egg-cup closely impacted within it,—the bevelled and indented edge of the cup resting on the spine,—the broken stem of the cup, which projected through the bowel, near the crista of the left ileum. Immediately beyond the mouth of the cup, which pointed *downwards*, relatively to the course of the intestine, and was nearly filled with liquid feces, the ileum turned towards the left groin, where it formed the adherent hernia, and then again crossed towards the cæcum, the length of bowel between the cup and the cæcum being about ten inches. There was extensive adhesion between the two folds of the ileum and the peritoneum, about the mouth of the cup,—ulceration having commenced through the coats, from the cup to the groin, evidently indicating the commencement of a process by which Nature intended to dislodge the extraneous body. At this time it was an object of my solicitude to ascertain, as far as morbid appearance could decide, by what channel this cup entered the alimentary canal. I therefore requested my friend, Mr. Stephens (as I was engaged with my pencil at this point), to trace the colon from the cæcum downwards. This inspection demonstrated the whole course of the large intestines to be in a comparatively healthy condition,—*the colon decidedly so*,—and the ileo-cæcal valves perfect,—the caliber of these intestines being rather contracted from their symmetrical proportion. The small intestines, on the contrary, the ileum especially, were extremely distended and discoloured,—the graduated tints of crimson and dull purple evincing long-continued disease, which was still further confirmed by numerous patches of ulceration. The villous coat of the ileum was of a dull red colour, and extensively disorganised.

Having thus briefly related the case to the Society, I would observe that the interesting points for discussion are, the *relative* importance of the cup and the hernia, and the mode of ingress. It is probable as the cup had traversed so far, that it would have reached the cæcum, perhaps the rectum, had not the hernia offered an insuperable barrier; and that on this opposition the vis medicatrix naturæ had commenced that process which, though in itself comparatively salutary, had established all the morbid phenomena in the vicinity of the hernia. Then, as regards the mode of introduction of the cup (which I may propose as a question), my own confident opinion is, that it was taken by the mouth. The healthy condition of the large intestines, and, above all, of the ileo-cæcal valves, disprove, I think, the notion of its being introduced per anum. If the frænæ morgagni did not efficiently oppose its passage, still such violence would they experience by the intrusion of so large a body, that the lesion would be evident on dissection. It is difficult, too, to credit an inverted action so powerful as to draw up such a body to so intricate a position, and even beyond an almost constantly descended hernia. The disease and distention which pervaded the course of the small intestines, and the *dilated condition of the pylorus*, which I believe I have omitted, must incline us, I think, to the conviction of the cup having been *swallowed*, although the physiology of deglutition, and the relative anatomy of the fauces, especially the processes of the sphenoid bone, render it one of the most curious instances of which we have any record.

[The following engraving exhibits a representation of the cup. The size and figure are preserved in the drawing with exactness.—Rep. L.]

ACCOUNT OF THE PREVALENCE OF

URTICARIA AS AN EPIDEMIC.

By D. Macfarlane, *M.D., Darlington.*

In looking over my notes for the bygone year, it struck me that the publication of the following facts might, from their novelty and practical bearing, be interesting to many of my medical brethren. I say the facts are novel—they are so to me at least; for though the annals of medicine furnish numerous examples of diseases prevailing epidemically, which usually appear in isolated cases, yet I have not been able to find recorded any instance of *urticaria* showing itself as an epidemic. In such a form, however, during the summer and autumn of last year, it did prevail to a considerable extent in this neighbourhood. The first invasion of the complaint was attended with peculiar, and rather alarming circumstances.

Early in the month of June last, during the same night, several of the inmates of a large inn, near this place, were seized with pain about the stomach, sickness, and vomiting. I saw them the following morning. I found seven or eight of them indisposed, but none so ill as to be confined to bed. They all complained of a feeling of oppression at the epigastrium, general uneasiness, and a tingling itching sensation of the skin. The cook, who suffered most severely, was covered all over the face, trunk, and extremities, with a papular-looking eruption, the integuments being everywhere red, swollen, and rough. She had still great uneasiness, and acute pain upon pressure at the stomach, with highly-inflamed eyes, and turgescence of the eyelids; quick pulse, furred tongue, and intense thirst.

The symptoms, combined with the fact, that so many had been taken ill at the same time, naturally excited a suspicion that something deleterious had been swallowed in their food or drink, and I thought I had found out the source of their sufferings, when informed that all who felt indisposed had partaken of the same gooseberry-pie at supper, and that the rest of the servants who had not eaten of the pie were quite well. The pie, of course, became the object of serious suspicions; part of it still remained, but when carefully examined afterwards, no trace of any acrid poison or deleterious substance whatever could be detected in it. Soon after, other members of the family and visitors in the house, some of whom were invalids, became similarly affected. The water was innocently blamed; the bread, though of the best quality, was suspected; and the cooking implements underwent a scrutiny. The patients, indeed, soon got well of the disease, but I remained for some time much perplexed, endeavouring in vain to discover the exciting cause. To my relief, however, similar cases in the same neighbourhood began to fall under my notice. I then became persuaded of the epidemic nature of the complaint. Numerous cases of this affection continued to present themselves for many months thereafter, both in this town and the surrounding villages: in all, I reckon I have seen upwards of a hundred cases, by far the greater part so slight as not to require the administration of medicine, and most of which I should not have detected had I not been on the look-out for them.

In some instances, the diagnosis was not easy to be made out, for the eruption not unfrequently assumed the character of other diseases of the skin, so that a person unacquainted with the prevailing epidemic, might readily have made a mistake. I have seen it not unlike varicella. Sometimes there was a diffused blush of

red over the surface, as in scarlatina; but in many cases it more strongly resembled measles; indeed, so closely did it occasionally take on the characters of the rash in measles, that the most accurate observer, I venture to say, judging from the appearance of the rash alone, would have pronounced the disease to have been truly measles. In one instance, I compared Bateman's plate of rubeola with a patient's skin, ill of urticaria, and so close and accurate was the resemblance, that the one might have stood as the copy of the other. I particularly remarked the presence of irregular semicircles, or crescents, which Bateman reckons so important a diagnosis of measles, and gives Willan the credit of being the first to notice and describe. The constitutional symptoms and progress of the disease were, however, generally sufficient to distinguish the epidemic I am describing from rubeola. But the discriminating mark of urticaria which I found applied in every case, and readily enabled me to detect its presence, whether dormant or disguised, and which mark it may perhaps be worth while to remember, was this:—*when strong friction was applied, for about a minute, to any part of the surface* (the forearm was generally chosen), *the nettle rash, in its true character, made its appearance.*

The duration of the eruption, when attention to diet and the proper use of medicines were persevered in, was generally about a week. But, in several cases, where the patient would not be restrained in the choice of food, nor be prevailed on for so trifling a disease to employ remedial agents, it continued for many weeks—indeed for months. From close investigation, I was led to the conclusion, that the use of acid fruits was generally, if not always, the exciting cause. *Post hoc, ergo, propter hoc*, is not necessarily a fair logical deduction, yet the universality of the fact of fruit having been eaten previous to the appearance of the rash, together with this circumstance, that in one case which I had an opportunity of watching closely, when the eruption had subsided, it was repeatedly reproduced by indulgence in eating fruit, lead me to regard the use of fruit, and the late epidemic rash of this neighbourhood, in the relation of cause and effect.

The treatment I adopted, where any was required, consisted in the prohibition of fruit and stimulating drinks; at the same time I gave a mercurial alterative pill, and a saline aperient solution, containing an excess of an alkali.

Darlington, Durham County,
Jan. 20, 1834.

LONDON-HOSPITAL MEDICAL SOCIETY,

Friday, January 3rd, 1834.

SUPPOSED ABSCESS IN THE ŒSOPHAGUS.

Dr. Venables, this evening, as there was no other subject before the Society, drew attention to a case which he considered, he said, to be one of the most extraordinary he had ever witnessed. He was not at that moment able to refer to his notes, and could not therefore give very full details of the case, but he believed that he could state sufficient to interest the members in a high degree. He had been requested to visit a young man of the name of Ramsey, a butcher. He found him sitting in a chair, and complaining of a difficulty, amounting almost to an impossibility, of swallowing even the minutest particle of solid food. Even a crumb of bread, if it unconsciously passed the pharynx, on entering the œsophagus produced intense pain, followed by convulsions and temporary spasms of various muscles of the trunk and extremities. These effects arose solely from the deglutition of solids; fluids could be swallowed without inconvenience. The patient, who was also suffering from a paralytic affection of the lower extremities, of a very singular character, was wholly incapable of preserving, or even assuming, the erect posture, even with the assistance of crutches, unless placed with them so uprightly, that his centre of gravity did not rest beyond the perpendicular; but the moment any circumstance altered the statue-like position, he would fall to the ground. Notwithstanding this, when sitting in a chair or in bed, he could stretch out the limbs and draw them up,—not certainly with ease and facility, but yet tolerably well. When he, Dr. V., visited him, the patient declared that he felt such extreme agony on every attempt to swallow, that he had made up his mind to visit Sir Astley Cooper, and request him to make a hole in his chest, and examine the parts within, as he was determined to perish in *any* attempt at relief, rather than endure a longer protraction of his sufferings. An eminent physician in the neighbourhood had told him, that he laboured under stricture of the œsophagus, to which he (Dr. V.) replied, that the truth of that might easily be ascertained by a probang. The man caught at the idea, and would not rest satisfied without having such an examination instituted. Understanding, however, that he was then under the care of a surgeon,

he (Dr. V.) declined any interference, except in conjunction with that gentleman. In consequence they met, and he (Dr. V.) previously obtained the following history from the gentleman. The patient had been attacked with symptoms of idiopathic fever, which ultimately assumed the typhoid character, and, after the usual progress, convalescence took place. But as this state advanced, the dysphagia succeeded, and, as that increased, the paralysis came on, gradually increasing, till the patient at length arrived at the state in which he was found by him (Dr. V.) at his visit. A physician, to whom the case was mentioned, but who had not seen the patient, directed nitrate of silver to be given, but the man took only one dose, as the attempt to swallow the pill produced such intolerable agony, that he declared he would not again undergo the suffering for the universe. It was now agreed to pass the probang, which Dr. V. was obliged to use himself, as his colleague declined the trial, fearing the worst consequences therefrom. On passing the probang it went down very readily to a certain distance—supposed to be within an inch or so of the pylorus—when a most violent spasm ensued. Consequently, no further attempt was made that day; but, on being asked by his colleague what he conceived to be the morbid condition, he (Dr. V.) replied that the impression on his mind was, that there existed an irritable ulcer, attended with extreme sensibility of the parts surrounding it, and in its immediate neighbourhood. Three more attempts were made to pass the before-named point, but with similar results. On the fourth occasion—that is, the fifth attempt, he (Dr. V.) was determined to pass the obstruction if possible, let the consequences be what they might. Accordingly, on the following Saturday, the probang was passed gradually to within about an inch of the obstruction, and then arrested, while the patient's attention was engaged by conversation, and the struggles of the patient with his hands, which had previously been very troublesome, so far provided against. When the mind was sufficiently abstracted, the probang was suddenly (and to the patient most unexpectedly) thrust down into the stomach. Most violent convulsions followed, so that the probang was almost as hastily withdrawn. The patient was put to bed, and left. Between nine and ten o'clock in the evening, a message was received, saying that he was supposed to be dying. He was visited about twelve o'clock by the surgeon, and also by himself (Dr. V.) and their surgeon on the following morning. Between eight and nine on the preceding evening, about five hours after the introduction of the probang into the stomach, he felt sick, retched a little, and then threw up an immense quantity of matter. So great was the quantity, that two chamber-pots and a wash-hand basin were filled with it. The first portion was of greenish hue, but the subsequent discharges presented the usual characters of ordinary pus. When now asked whether he could swallow solids, he said he thought from his feelings he could, but would not venture to try. Nitrate of silver in solution was directed, and the pus continued to be vomited in quantities at intervals, till the Wednesday or Thursday following. Somewhere about three gallons were discharged in the whole. In about a fortnight, his deglutition having been completely restored, and he being able to walk, or rather to move, with the assistance of crutches, he was advised to visit the coast, use warm salt-water baths, and, subsequently, cold sea bathing, the season of the year admitting the employment of the latter. He returned home in three weeks, or a month's time, perfectly restored to health, and followed his business as a butcher, in which he was as active and able as at any period of his life. He thus continued for about two years, when he was attacked with small-pox, of which he died, but he (Dr. V.) could not procure permission to examine the body, though the nature and seat of the abscess were a matter of no little interest and mystery. He himself felt very great difficulty in coming to any conclusion on the subject, and whenever he endeavoured to arrive at one, he found so many objections opposed to it, that he had abandoned speculation thereon. He should, in conclusion, be glad if the society would exercise their judgment upon the facts. He might observe, in reply to a question, that he had not instituted auscultation, or any other mode of thoracic exploration, in the case.

Mr. Bloomfield observed, that this was greatly to be regretted, as auscultation would, he had no doubt, have indicated an abscess in the apex of the lung, and put the nature of the case beyond doubt.

Dr. Venables thought Mr. B.'s regret was founded in error. The lungs could never have contained an abscess of such magnitude (allowing it to have been diffused throughout the entire tissue), without occasioning pectoral symptoms of greater or less severity. Much less could it have existed in any particular or definite portion of the pulmonary tissue without symptoms. Yet the patient exhibited neither hectic cough, nor the slightest febrile manifestation. Hence he could see no reason for

referring the seat of the abscess to the lungs.

Mr. BLOOMFIELD reiterated his regret, and in his views was supported by Mr. LITTLE.

Dr. VENABLES observed, that when a professional man was called in over another, or was attending in conjunction with him, he had two very important objects before him, one of which was to make himself acquainted with the nature of the case by every possible legitimate and consistent means of inquiry into its history. But he must, at the same time, be careful that in this he did not make himself appear ridiculous. If a physician were called to a patient obviously suffering from an extreme paroxysm of gout, and instead of attending to the obvious phenomena, were to draw forth a stethoscope, and apply it to the backbone or thorax, though he might impose on the patient, he could not on his professional colleague, but must acquire a character which he (Dr. V.) had no ambition to attain. He therefore now preferred hearing these expressions of regret from his friends, than incurring the risk of such imputations as those which must have attended auscultation. The difficulty of deglutition obtained his attention, and in the absence of all symptoms of disease in any other part, his obvious duty was to examine the œsophageal tube, whence he derived an impression that an ulcer existed in that tube. Even the surmise of an abscess in the lungs appeared to him most illegitimate, and thoracic exploration would, he thought, have appeared ludicrous in the extreme.

Mr. BERRY suggested that the abscess was probably situated in the spleen.

Dr. VENABLES considered this a much more tenable opinion, but, passing by the seat of the abscess, the cause of the paralysis remained in obscurity.

Mr. GARLAND thought there was nothing to regret in the omission of auscultation. The phenomena clearly indicated, that the abscess was not in the lungs. He considered the abscess and the paralysis as consequences of the fever, wholly unconnected with, and independent of, each other, being merely separate co-existences arising from the same original cause.

The time for adjournment having arrived, several members requested Dr. Venables to bring the subject forward again upon a future occasion.

ROYAL INSTITUTION.

BOTANY.

DR. LINDLEY, Professor of Botany at the London University, has lately given at this Institution, a brief course of lectures on the science of botany. We give an analytic report of his highly-interesting introductory lecture.

The Doctor commenced with a dissertation on the definition of botany. Botany, he said, consisted, contrary to the opinion of Solomon, and of many young ladies, not merely in a knowledge of the names of plants, but in a knowledge of their various intimate relations. It was not, however, necessary for a beginner immediately to enter upon those abstruse considerations. It would be better first to acquire a knowledge of the more simple facts which might ultimately be arranged in a scientific fashion. The science of botany had been divided by professors into two branches: systematical and physiological. Systematical botany implied nothing more than a methodical classification of plants according to their external forms or sensible qualities. Physiological botany, however, was a much deeper subject, and embraced the laws which regulate the growth and development of the denizens of the vegetable kingdom.

The first vital phenomenon exhibited in plants, was germination, or the development of the embryo. This embryo, or *corculum*, as it was called by some botanists, was a little torpid body contained in the seed of plants. This body, or germ, existed in all seeds, and was the *principium et fons* of the plant. When exposed to the action of heat, it enlarged, and a part was pushed upwards towards the light (the *plumula*), whilst another part, the *radicle*, penetrated more deeply into the ground. On removing the husk of any seed, a two-lobed body was discovered, and between those two lobes (which are called cotyledons) a point of junction was found, and at that point the corculum, or germ, was situated. The relation between the germ and the cotyledons, as regards size, varies very much. In the cocoa-nut the germ is exceedingly small, compared with the cotyledonous part, whilst in other plants the cotyledons are wanting altogether. Three circumstances are necessary to the growth of a plant; air, a certain degree of heat, and darkness. If seeds are buried too deeply below the surface, no germination will take place. The necessity of the presence of heat to the growth of plants is a truism too trite to be dwelt upon. The necessity of almost total darkness to suc-

cessful germination might be made manifest by experiments. If a quantity of mustard-seed, for example, be placed in a warm and moist flannel, and in the dark, in twenty-four hours copious vegetation will be produced. But if the same experiment were tried *cæteris paribus*, with the admission of light, at the end of the stipulated time little or no change would be evident in the seed.

By exposure to heat, moisture, and air, and by abstraction from the light, the germ will be made to enlarge, a change will be effected with the albumen or farina of the cotyledons, and a formation of sugar (or *malting* in fact) takes place. This new substance forms the nutriment of the young plant, and provides for its growth until it is strong enough to abstract nutriment from the soil. The *plumula* ascends, and the radicle descends, until the first becomes the stem, and the last the root of the plant. [The lecturer here illustrated by drawings the process of germination in *wheat*, in the *acorn*, and more especially in the *cocoa-nut*.] Quoth he, "It is a beautiful provision of nature that the vital properties of the cocoa-nut are exactly adapted to the situation in which it is placed. The cocoa falls from the tree amidst a heap of the fibrous rind of the fruit, where (being in an arid climate) it is entirely devoid of moisture. But, like the ship of the desert, the cocoa-nut has a supply of moisture within itself. The germ of this plant, which I have already shown to be so small in comparison with the albumens of the nut, begins to grow, as in all other plants, by sending its *plumula* towards the light and its *radicle* towards the centre, where it meets with, and derives support from, what is commonly called the milk or serum of the nut, and gradually attains a size which enables it to obtain a hold on the soil, and ultimately to become the most majestic dryad of the forest." [The lecturer here exhibited several sections of the cocoa-nut beautifully illustrating the different degrees of germination.]

With but few exceptions light is hostile to the growth of roots; of this the hyacinth may be made an example. The hyacinth, the ornament of the drawing-room window, when exposed *ab initio* to the full glare of light, will vegetate but imperfectly. The roots will only be partially developed; but if the plant be placed in a cellar of genial temperature, at the commencement of germination the fibrous roots will be fully produced, and in a remarkably short space of time.

A root, when correctly defined, is that portion of the plant which has neither leaves nor buds. The upper part of the plant is always characterised by an abundance of buds, which, when excised, exhibit embryo leaves and flowers. On inspecting a root, nothing of the sort is to be found. The whole expansion of the root is not to be considered as the nutritive part of the plant; the fibrillæ only perform the function of nutrition. The *caudex* is subservient only to the fixation of the plant. It is remarkable that roots grow only from the point, and consequently have a constant tendency to diverge from the parent caudex. Now this law serves two important purposes:—1st. It extends the source of nutriment to the plant by removing the absorbent points from the exhausted soil to a situation where they may imbibe new juices. 2nd. By the same process it enables the fibrillæ to avoid the re-absorption of the poisonous exudation of the plant, for I shall show by-and-by that every individual of the vegetable kingdom throws off a peculiar poisonous secretion, which if reabsorbed would be destructive. The surrounding soil becomes impregnated with this exuvia, and therefore unfit to support vegetable life. These circumstances are sufficiently explanatory of the necessity (which everybody is aware of) of changing the mould in flower-pots, for not only is the nutriment exhausted, but the eccentric growth of the roots is prevented, and the absorption of the exuded matter is rendered unavoidable.

The action of nutrition in the roots has been explained by Dutrochet in the following manner:—If you place a certain quantity of sugar-and-water, or gum-and-water, or any other dense liquid, in a bladder in water, the water will be absorbed into the bladder; that is, the rarer fluid will be attracted by the denser. In like manner the fluids circulating in the roots of plants, being dense, attract the thinner moisture of the earth. The presence of light, generally speaking, is a cause of embarrassment to the functions of the root, but not invariably; there is a curious exception in the case of the *vaquais* of the Isle of France, in which the original stem is too weak to support the magnitude of the tree. In this beautiful vegetable, roots were thrown out from the stem, and gradually grew downwards until they fastened in the ground, and formed so many stays for its security. In this instance, also, there is a curious natural contrivance for the supply of moisture to the descending root, for a separation of the bark takes place at the point forming a calyx, in which the atmospheric moisture is deposited.

The roots are the mouths of plants, and a plant was fantastically defined by the ancients as an animal turned upside down.

If we adhere strictly to our definition of *a root*, we shall be compelled to exclude many reputed roots from the class. The potato is not a root, for the eyes are nothing less than buds, which, when cut into, are found to contain all the essential parts of that structure. If we carefully examine the mode of growth manifest in the potato, we shall find that these buds throw out stems, which proceed laterally, and terminate by forming other tubers, or upwards, when stems and leaves are developed. [The lecturer produced a potato which had been left on his mantlepiece for several months, and carefully excluded from moisture. Imperfect vegetation had taken place at the expense of the farina of the vegetable, and reflant as well as ascending stems had been produced.]

WESTMINSTER MEDICAL SOCIETY.

Saturday, January 16th, 1834.

Dr. COPLAND in the Chair.

A RESOLUTION was read to the effect,—that the name of every candidate for membership should be submitted to the Committee previous to taking the vote on his admission. Some opposition was offered to the motion, but it was explained that the "convenience" of the Society would be consulted by its adoption, and assent was therefore given to it.

Mr. COSTELLO then presented a "*projet de loi*," relative to medical reform in France, received by him from M. Double; and he submitted that the most proper mode of its disposal would be that of presenting it to Dr. Sommerville, as a chief mover of the reform resolutions in the Society.

EXCESSIVE DISCHARGE FROM THE NOSTRILS.

Mr. KING then related the following case which had occurred in the practice of Mr. Rees, of Finsbury-Square, by whom the particulars had been furnished to him:—A female, æt. 52, had an excessive discharge of clear limpid fluid from the left nostril, to the amount of a quart in twenty-four hours. The secretion commenced three months previous, and flowed night and day, and it became necessary to absorb the discharge with a sponge, as, from its constant trickling into the larynx, suffocation had several times been threatened. The patient was stout, but subject to excessive action of the sanguiferous system. Her eyelids were puffed, the countenance florid, and the pulse 96. A general disposition to anasarca existed, and the catamenial discharge, which appeared at ten years of age, and which had continued to flow from that time, was quite regular. Her diet consisted of vegetables. Hitherto neither local nor general treatment had produced relief.

Dr. J. JOHNSON said that the discharge was evidently a remedial, or, to use a modern word, a "conservative" process of the animal economy, to avert disease. It might not be proper to restrain the secretion, but rather to discover and remove the cause.

Mr. KING said that the discharge from the vagina having appeared so early, and still continuing, although the woman was so aged, the view last expressed seemed to be confirmed.

WANT OF SLEEP.

Dr. JOHNSON drew attention to a subject which though it at first might appear very trifling, frequently baffled practitioners, and was the cause of great distress and injury to the health—want of sleep,—a source of complaint in many persons, who in other respects apparently enjoyed perfect health. It was accompanied by twitching of the limbs, inability to lie long in one position, and absence of the refreshment which repose should, by the morning, have ensured. The cause was, in his opinion, the existence of some acrid or acid matter in the small intestines. Sometimes eructations of gas would take place, when the irritation would cease for a time. The remedy was, not to take meals late in the day; but as people would not always adhere to such rules, it became necessary to seek for other remedies, and none had he found so beneficial as *carbonate of soda*, in half-dram doses, administered on going to bed. This medicine had frequently procured six or seven hours sleep, while, without using it, the patient passed a restless night.

Dr. COPLAND coincided with the opinions of Dr. Johnson. He had found large doses of soda, combined with anodynes, particularly efficacious.

Mr. GREENWOOD thought that the restlessness and want of sleep were only symptomatic of some other disease, perhaps chronic duodenitis.

Mr. KING also thought that a deeper dive for the cause would bring to light chronic inflammation of some portion of the bowels. The constant use of soda was often injurious, although the patient extolled its effects. It disturbed the urinary organs, and deposits of saccharine matter to a considerable extent sometimes took place.

Mr. HUNT, too, considered the habitual

use of soda to be injurious, and questioned whether the presence of acid was not, eventually, increased by it. Dr. Prout was of this opinion, and carefully avoided its use after meals. He (Mr. Hunt) was in the habit of giving small doses, for he certainly had observed that those persons who used it very largely, became pallid and unhealthy-looking persons.

Dr. COPLAND admitted that its excessive use was injurious, but he did not consider that Dr. Johnson recommended it in excess.

Dr. JOHNSON did not think the daily use of soda serviceable, but it was not to be withheld altogether, when it was indicated by the presence of acid, because it was not useful in excess. If eructation of air took place after using soda, we might conclude that acid was present. He was aware that if we referred to the cause of the complaint we must resort to bitters and tonics, but he had merely mentioned the distressing want of sleep as forming part of the disease.

DENTISTRY.—MARQUIS OF ANGLESEA'S CASE.

Mr. HUNT related the case of a gentleman who had swelling of the right parotid gland, without pain, but with constant uneasiness, redness, tumefaction of the fauces, and difficulty of swallowing. The tumour at first appeared at the anterior part of the gland, it then would subside, and afterwards appear at the posterior portion. He took the opinion of a highly-respectable dentist on the subject, who thought, with him, that probably the existence of a tooth at the extremity of the jaw might be the cause.

Mr. WAITE said he had agreed with Mr. Hunt in his view of the case, let out some matter, and after some trouble, succeeded in extracting a tooth, upon which the tumour disappeared. Mr. Waite then entered on an explanation of the anatomy and diseases of the gums, the sympathy existing between them and the constitution generally, to which sufficient attention was not, in his opinion, paid by surgeons. He also made some remarks on the treatment of tic douloureux, and on the plan adopted by Mr. Scott, of the London Hospital,—the employment of caustic,—reported to be successful when other remedies had failed. In the course of the discussion, the case of the Marquis of Anglesea was referred to, and as some erroneous notions upon this subject were said to be current, Dr. Ryan, who it was stated had been consulted, was requested to afford an explanation of the case.

Dr. RYAN replied that he should have great pleasure in informing the Society of the Marquis's case; but he felt much hesitation in doing so, though solely on ethical grounds; but if the President and Society sanctioned his relation of the outlines of the case, he should be most willing to give them.

Dr. JAMES JOHNSON observed that he saw no cause for delicacy; the whole profession was aware of the disease of the Marquis of Anglesea, and the case of a Marquis did not differ from that of any other man. (The whole Society concurred in this opinion.)

Dr. RYAN then said, that he was one of a great number who had been consulted in the case of the noble Marquis. He would very briefly describe the outline of his case. Many of the most eminent physicians and surgeons of this and other countries were consulted, but, as a matter of course, took different views of the cause of the malady. Some considered it purely nervous; others that it was excited by pressure on the facial nerves; more that it was caused by concussion of the spine, induced by riding on horseback, an exercise to which the noble Marquis was extremely partial, and that as the weight of the body was on one inferior extremity (the other having been lost at Waterloo), the spine was frequently concussed by the plunging of the spirited horses on which the Marquis was accustomed to ride, because whenever this occurred, though he might have been free from neuralgia for several days previously, the disorder was instantaneously excited. It was right to mention that the disorder was much less severe since Sir James Murray, his experienced and judicious physician, had discovered some tumefaction in the abdomen and successfully removed it. This arose from two alvine concretions, the nucleus of one was a mercurial pill covered with silver leaf, that of the other was a tea-leaf. After these were expelled, the noble patient suffered much less from his complaint than at any former period since its supervention. Every remedy hitherto proposed by British and foreign physicians was fairly tried; but unfortunately with only temporary benefit. When the noble Marquis was last in London, and on the eve of departing from this country to the Continent, Sir James Murray, and himself (Dr. R.), most maturely deliberated upon the case, when he (Dr. Ryan) related some cases of neuralgia which yielded to the use of strychnine, and read the details from his note-book to Sir James, who promised to try the remedy. He had not since heard from Sir James, but entertains no doubt that he tried the strychnine. He (Dr.

Ryan) therefore thought that under this circumstance, it was not quite fair to ascribe the mitigation of the disorder, if any took place, which he sincerely hoped there had, to change of air only.

FACTS BEARING ON THE

RICEAN ETIOLOGY OF CHOLERA.

To the Editor of THE LANCET.

SIR,—On the evening of Saturday, January the 4th, I was called to see a family of the name of Adams, residing about ten miles from this place, to whom it was supposed poison had been maliciously administered by a relative.

On arriving, I found five persons, two adults and three children, apparently labouring under the influence of some poisonous agent. The symptoms were similar in each individual (with some little variety in degree), namely, frigidity of extremities; cold clammy perspiration bedewing the whole surface; in some of them the pulse imperceptible at the wrist, in others barely perceptible; vomiting had just subsided.

Under the use of emetics and purgatives, all ultimately recovered; and now the question is, how these symptoms were induced; whether by accidental admixture of a substance hereafter to be mentioned, or by the wilful administration of poison by the suspected party. I shall here merely state the circumstances connected with the affair, without drawing any conclusion, leaving the reader to do that from the premises supplied.

The suspected person, who is wife to one of the individuals above mentioned, made a cake on the aforesaid evening, and distributed it to the persons affected; she also, it is said, partook of it herself. Immediately after, they were all seized with the symptoms before described; and so like was the group of symptoms to those of cholera, that the other inmates of the house pronounced that to be the disease which had broken out amongst them, and they were only dissuaded from flight by learning that those alone of the family were affected who had eaten of the cake. This circumstance, together with the cholera, having been absent for four months, prevailed in removing the first impression. The idea of poisoning now seized their minds, and I was instantly sent for. Not a particle of the cake was to be found, neither had any of the disgorged contents of the stomach been preserved. Under these circumstances, and as there was no other clue to the mysterious affair, I directed that the police should search the house, and particularly the box from which the accused said she took the flour, as I considered that it might be mouldy. The next morning a police-sergeant came, and told me that there was no more flour in the box, and that the only thing remaining in it was some damaged rice, which had lain there since the season of the dearth of provision in Ireland, in the year 1830. Having read in THE LANCET a report of the interesting discussion concerning the rice-origin of cholera, it immediately flashed across my mind, and I desired the policeman to bring me some of the rice, a specimen of which I now take the liberty of forwarding to you for your inspection. It bears all the characteristics of the bad rice described by Dr. Tytler; and although I do not go all the way with that gentleman in his conclusions on the origin of cholera, I think the profession is greatly indebted to him for the manner in which he has brought the subject before the public. His powers of debate are certainly creditable to the profession to which he belongs, and I shall feel great pleasure if the substance of this letter will afford him any corroborative testimony in favour of his *partially*-proved theory. The bag in which the rice was found had several holes in it, so that the contents might easily have worked their way into the flour, and become amalgamated with it in the cake. There is not any proof of the accused having lived on bad terms with her husband, and, indeed, the latter in my presence insisted that his wife would not be guilty of such a crime. In addition to this, her sister received and ate part of the bread.

There are some other circumstances which I should have previously mentioned, namely, that one of the sufferers had not passed urine for upwards of twenty-four hours from the commencement of the symptoms; and, in the whole, the bowels were unaffected.

Nothing further has as yet turned up in illustration of the affair, and, as bad rice has been proved to be capable of generating similar symptoms, there is sufficient reason for *suspecting* its agency in the present instance,—at all events, until a more efficient cause can be adduced.

There is one feature in this matter which is particularly worthy of notice, to wit, that the bad rice described by Dr. Tytler *has found its way into the remotest parts of Ireland*; and, in this instance, the house in which it was found was the second attacked in this district by cholera,

—three individuals of one family residing in it having been cut off by that devastating pestilence. I am, Sir, yours, &c.,

MARTIN A. EVANS, M. D.

Clifden Dispensary, County Galway, Ireland, January 14th, 1834.

LETTER FROM DR. TYTLER, WITH REMARKS ON THE FOREGOING COMMUNICATION.

To the Editor of THE LANCET.

SIR,—I have to return you my sincere acknowledgments for your kindness in allowing me to peruse the letter of Dr. Evans, of the Clifden Dispensary. It will, no doubt, be in the recollection of many of your readers, I mean, those of them who attended the discussions on the Rice-and-Cholera question at the *London Medical Society*, that Dr. James Johnson vehemently reiterated his sole *dictum* (in opposition to the facts stated by me) that diseased rice had not reached Ireland, and that the cholera prevailed in that country, where the inhabitants lived solely on "buttermilk and potatoes." Such was the unqualified assertion of Dr. Johnson, and which he has since that period thought proper to repeat in print in the last number of his Journal,—forming part of an extraordinary string of remarks, the nature and object of which I have in vain endeavoured to comprehend. The erroneousness of Dr. Johnson's iterated and reiterated assertion is, however, at length fully exposed in the letter of Dr. Evans. For we have it upon the authority of that Physician, that "damaged rice" has been in Ireland "since the season of the dearth of provisions of the year 1830," and that the damaged rice thus existing in Ireland, has "all the characteristics of the *bad rice* described by Dr. Tytler." Yet did Dr. Johnson, in the Medical Society, most vehemently deny the existence of that rice in Ireland. Nay more, we are informed by Dr. Evans, "that the bad rice described by Dr. Tytler has found its way into the remotest parts of Ireland, and that the house in which it was found was the second attacked by cholera in the district of Galway." Here, then, I have the satisfaction of saying, under God's mercy, that not only is my veracity completely vindicated with reference to the facts stated by me regarding Ireland, but that the poisonous rice and cholera have been found co-existent, not only in the same district, but even in the same house, in the year 1830, in Ireland; and, consequently, Dr. James Johnson's assertions, bold and unqualified as they were, were founded in error, and proceeded from a positive want of knowledge of the facts connected with this most important subject.

With respect to the circumstances of the highly interesting case communicated by Dr. Evans, I beg to observe, that in India an instance occurred some years ago of two children affected with cholera, after eating part of a cake mixed with rice; and that, in 1822, the wife of Bousier, a citizen of Paris, and other individuals, were tried and their lives put in the utmost jeopardy, in consequence of having been suspected of Bousier's murder, he having been poisoned *by a meal of rice*, which he ate for his breakfast. An account of this case I shall do myself the pleasure of forwarding to you at an early period: and you will probably be disposed to coincide with me in opinion, that this part of the subject, which bears upon the fact of individuals being suspected of poisoning their neighbours who have unfortunately partaken of deleterious rice, is by no means the least deserving of attention, in the numerous questions to which an inquiry into the use of noxious rice gives rise.

At length have I the gratification of being fully aware, that the circumstances connected with deleterious rice have attracted, and are daily exciting, the attention of the most eminent members of the profession both in London and Edinburgh. Previous to my recent departure from the metropolis of Scotland, Dr. Mallison, of Picardy-place, Edinburgh, informed me, that a specimen of koora, or kun, had been subjected to analysis by two eminent chemists, and that an oleaginous matter had been detected as a constituent of it, and which, there is reason to believe, possesses analogous properties to those which characterise *croton oil*. Here, then, I may, consequently, consider, that a stupendous revolution, which your most valuable publication has been materially instrumental in producing, is near its accomplishment in science. For medical men are now beginning to occupy their talents and apply their knowledge in a manner worthy of themselves and the profession to which they belong, by directing their researches to ascertain the particular constituents of the poisonous principle which pervades certain vegetable substances used as food, and bestows the dreadful noxious properties which they are known to possess, on vitiated kinds of farinaceous grain.

In conclusion I beg to remark, that there is now placed on record the following well-supported facts, regarding the dreadful effects produced by the use of deleterious rice in Great Britain, since the origin of *morbus oryzeus* in 1817;—

In 1818 the cholera was epidemic in England, and at that period rice flour was mixed in large quantities with the bread *flour* of the country.

In 1822, rice produced serious effects in a public institution in London.

About 1826, very deleterious effects were occasioned in a family at Twickenham by the use of rice.

In 1830 damaged rice was in Ireland, and the second house attacked with cholera in the county of Galway, was one in which the noxious rice was present, and wherein it had been used for food.

In Nov. 1833, a woman, named Welldon, died shortly after eating a meal of rice at Limehouse, according to her own statement as contained in Mr. Barnett's letter published in THE LANCET. This case alone is sufficient to excite the whole of our medical Israel, from Dan even to Beersheba. For it did not occur at Jessore, Allahabad, the Mauritius, Batavia, or Canton, but in the metropolis of the British empire, and is recorded in the pages of THE LANCET, uncontroverted by any man. May I then express my full conviction, that a sufficient case has at last been established, to attract the attention of the British legislature to the important facts which are proved to affect the health of the community of the British islands, by means of the vast importation, in free traders, of deleterious rice from the East Indies, and that among other subjects connected with the condition of British India, the means which ought to be adopted for improving and cleansing the rice lands of Bengal, will not pass unnoticed by the intelligent members of the present Parliament? I beg to remain yours very faithfully,

R. TYTLER, M.D.

London, January 20th, 1834.

THE LANCET.

London, Saturday, Jan. 25th, 1834.

IF persons occupying high and important offices in the state could but be made to understand the value of impartial evidence in all matters of legislation, they would ever turn a deaf ear to the crafty whisperings of courtly and intriguing monopolisers and slanderers. In the common pursuits of life, if an individual constantly appeal to secrecy as his shield while arguing on matters of general interest, the honesty of his purposes is immediately questioned by all persons who are acquainted with the ordinary causes of human action. If it be wrong, therefore, in unimportant matters to submit to the injunctions which secret contrivers would impose on our language and our conduct, how much more pregnant with danger is the adoption, by legislatures, of the closet recommendations of parties who dare not subject their propositions to the critical analysis of a public scrutiny!

These remarks are drawn from us by the recollection of the unfavourable impression which was made on the mind of the late Right Hon. GEORGE LAMB, the much-respected Under-Secretary of State, by the private representations on public matters made to that gentleman. Mr. LAMB, it will be remembered, brought forward in the House of Commons the Apothecaries-Act Amendment Bill. Hence his active interference in medical affairs soon rendered him an unsuspecting object of corporate intrigue. Mr. LAMB was beset daily by hosts of monopolists and their agents, and it was incessantly attempted, in private interviews, and at private conversations, to represent to him the dangers that would result from legislative interference in medical affairs,—to point out to him the admirable construction of the existing laws,—the flourishing state of the profession, as compared with that of former periods,—to impress on him that medical corporators govern their institutions with the most virtuous disinterestedness,—and to convince him, in short, that the least change in medical law might lead to a great augmentation of existing evils. Or if any alteration at all were required, the emissary of the Apothecaries Company contended for an increase of power on the part of that worshipful body;—the President of the Col-

lege of Physicians sought for the privilege of granting degrees,—and the gentleman deputed by the Council of the College of Surgeons declared that no other amendment of medical law was required than the recognition, by legal statute, of the rights of members of the College in Lincoln's Inn Fields.

Until these contradictory and irreconcilable statements had acted by collision in the mind of Mr. LAMB, and thus led that gentleman to think for himself, and disabuse his understanding of the erroneous notions which had originated in the false statements of interested parties, he was not, it may be said, the enemy of the monopolists,—simply because he did not know that there existed plundering corporations under the management and entire guidance of monopolists. On one occasion we heard Mr. LAMB declare, in a private interview, that he fully believed that the whole profession would be satisfied with the change it was proposed to adopt at the recommendation of Mr. GUTHRIE,—a change which would have been as partial in operation as it was odious in principle,—as incompatible with the preservation of the public health as it was with the rights which ought to be enjoyed by all the legally-qualified members of the profession. On that occasion Mr. LAMB frankly declared that his judgment had been formed on incorrect *data*; and that henceforth his conduct should be influenced alone by testimony elicited by *public* investigation and discussion. Alas! This noble determination was destined to confer little benefit on the profession and the public, for, to the regret of all who were acquainted with the private and public worth of that gentleman, his official career in medical legislation has been for ever stopped by the relentless hand of death. The loss of Mr. LAMB is severely felt by the profession, as he proved, indisputably, by his conduct, both in and out of Parliament, that he was resolved to act justly towards practitioners generally, and firmly reject, on all occasions, the one-sided recommendations of individuals who were interested in the continuance of wrong-doing.

When the vacancy at the Home Office was announced, there was not a little anxiety, we may say uneasiness, felt on the subject of Mr. LAMB's successor. When, however, it was understood that Lord HOWICK would be appointed to the vacant post, great satisfaction was instantly manifested throughout the ranks of the profession,—the monopolists at the same time quailing under the new appointment, and the heads of the corporations showing the extent of their rage, by indulging in the foulest calumnies against his lordship's father. The occasion for slander, however, was not a fitting one, as Earl GREY, since he has filled the office of premier, has certainly exhibited no unfriendly feeling towards the medical profession. On the contrary, the noble Earl supported the Anatomy Bill, on the understanding that it was the wish of the profession that it should be enacted into a law; and thus, when he had the power to reject the Bill, and carry into effect the opinions which he expressed in 1828, his Lordship generously acceded to what he considered to be the views of the profession, rather than adhere with pertinacity to any abstract principle which he had previously, and possibly *then*, too, considered to be correct. We refer, especially, to his Lordship's ready acquiescence in the proposal, to no longer subject the bodies of murderers to dissection,—an alteration in our penal statutes which the noble Earl reprobated in very unequivocal language. The advocacy by the noble Earl, therefore, of the Anatomy Bill, was a liberal concession to medical opinion, and it is scandalous, therefore, to represent that the noble Premier is the unbending enemy of the profession.

As Lord Howick is a scholar of varied attainments, and has proved by his conduct in the House of Commons on the slave question that he is a bold and independent thinker, and indisputably honest in the declaration of his opinions, we believe that his appointment to the office of Under Secretary in the Home department will cause the profession to consider the death of Mr. Lamb, as regards the proposed changes in medical law, more as a private calamity than a public loss. Lord Howick, although a young legislator, commands a large share of public respect, and we entreat the noble Lord not to place his reputation in jeopardy, by sanctioning, in the remotest degree, the secret intrigues of the monopolists. The members of the medical profession call for a public investigation into their grievances, and as they have already found protection, and experienced much courtesy and a polite demeanour, from Lord Melbourne and his deceased brother, they hope and expect that the like measure of justice will be meted out to them in all their future applications at the office of the Secretary of State. Should a certain well-known supple courtier interfere, we would have the noble secretary and his colleague bear in mind, that that individual utters the sentiments of a small and insignificant *coterie*, and that with regard to his conduct in medical politics, there may be applied to him with much propriety, the monkish rhyme,—

> "Mel in ore, verba lactis,
> Fel in corde, fraus in factis."

The College of Physicians, like a blushing maiden, starts off suddenly from its admirers. This institution cannot endure the unexpected shock of commendation. There certainly is a strong love of consistency manifested by its governors; for, as during the last fifty years they have incurred the hatred of the profession, they seem to have resolved on adopting a line of policy which shall ensure to them that agreeable collegiate peculiarity. It was only the other day that we were at some pains to prove that this institution was by far the most liberal of the three medical corporations of this metropolis. Annoyed, we suppose, at such a distinction, the College has resolved on wiping out this unjust imputation on its character, and has seized, with avidity, a scheme which is calculated to render it a still more odious institution than either the College of Surgeons or Rhubarb Hall.

What is now the project of this body? That Graduates from Oxford and Cambridge shall no longer be admitted to the Fellowship as a *right*, but that all physicians who may hereafter apply to the College for examination, shall become "Licentiates" *merely*, and that the Fellows shall afterwards select from amongst the Licentiates such individuals as they may deem best qualified to participate in the exercise of the governing powers of the institution! Oh, thou cheating spirit of Reform! Why dost thou mock us with thy delusive phantasies?

Obviously, we have reason to rejoice that such a project has issued from the temple in Pall Mall East. It will help to push forward, with rapid strides, the question of general medical reform, and to accomplish for it a triumphal result. The device of the President and Fellows is founded in the hope that the Licentiates, the entire body of physicians, will submit to the degrading denomination of the college, because a manifestation of hostility from any Licentiate,—if such a regulation as this can be enforced under the existing charter,—would for ever exclude that refractory Licentiate from a seat amongst the Fellows. The scheme, in short, exhibits the abominable principle of self-election in its worst and most glaring

colours. It is precisely the system of the College of Surgeons. The Council there fill up all the vacancies which occur in their own court. They are self-elected; hence, self-perpetuated, and, exercising this extraordinary power, they exclude from the Council all those members of the College whom they have found it impossible to corrupt. While the independent gentlemen of the commonalty have usually been passed over with disdain, the hangers-on of the hospitals, the slavish toad-eaters of the Council, have been, as usual, approved and elected.

The example thus afforded has not been without its effect in the College of Physicians. The Fellows finding that the licensed and unlicensed physicians have petitioned parliament for the removal of their professional disabilities and burdens, consider that the best mode which can be adopted for quieting the malcontents, is to render the admission to the Fellowship an act of grace and favour. Thus, the Fellows erect themselves into a *self-perpetuating tribunal*,—rejecting or admitting, according to their caprice, all future aspirants to the Fellowships!

Observe. The present Fellows obtained their offices through having received their degrees at Oxford or Cambridge. In short, those Universities were the channels through which the present Fellows claimed the right of admission to the ruling Chairs of the College.

Having obtained possession of their seats, they immediately wheel round and insist, that no graduate, whether of Oxford or Cambridge, or any other place, shall be allowed to enjoy the like privilege, unless they choose to admit him as a matter of favour!

Thus, the entire body of Licentiates must consent to succumb to the Fellows,—to submit patiently to insult,—to remain silent under oppression,—or, in observing an opposite line of conduct, elect to be for ever excluded from the office of Fellow.

Such is the *reform* which is prescribed by our ruling authorities! When the details of this new scheme are placed before us, we shall enter into a full examination of the subject.

It would appear that recent events have produced a few changes in our medical associations. It will be seen by the following note, that Dr. GEORGE GREGORY signs himself, "*late* Secretary to the "ASSOCIATED LICENTIATE PHYSICIANS," and RODERICK MACLEOD is no longer a member of that body:—

"31, Weymouth St., Portland-place,
"Jan. 10, 1834.

"SIR,—You are requested to attend a General Meeting of the Associated Licentiates, at Dr. M. Hall's, No. 14, Manchester-square, on Wednesday, Jan. 15, at Eight o'Clock. I am, Sir, your obedient servant,

"GEORGE GREGORY,
"Late Sec. to the Association."

THE CULPRIT MACLEOD.

ON Tuesday last, about mid-day, the following note, numbered I., was delivered to our publisher by Mr. BLOOMFIELD, one of the clerks of the house of Messrs. LONGMAN and Co. As the Editor was absent from town, the document was not placed in his hands until the following morning, about ten or fifteen minutes previous to his receiving the letter marked No. II., by a messenger who came direct from the house of Mr. TUCKER:—

No. I.

To the Editor of THE LANCET.

SIR,—You state in THE LANCET of this day that I had been the bearer of a communication from Dr. Macleod to you conveying a wish on his part that "all hostilities" should cease between you. There is some great mistake in this. Dr. Macleod never expressed any desire of the kind to

me, nor authorised me to make that or any other communication to you.

I am, Sir, your obedient servant,
J. H. TUCKER.

17, Howland-Street,
Jan. 18, 1834.

Before we had recovered from the stunning surprise which a perusal of this brief communication had occasioned,—and the extent and character of our astonishment will be conjectured by the reader when he has examined No. II.,—we were favoured with the following letter from Mr. TUCKER. No. I. is dated Saturday, though it was delivered at our office only on the following Tuesday:—

No II.

To the Editor of THE LANCET.

SIR,—After I had dispatched my letter of last Saturday to THE LANCET Office, stating that I was not the bearer of a message from Dr. Macleod to you, I thought that something more was due to all parties.

You are quite correct in all you have said, excepting that Dr. Macleod expressed a wish that I should communicate anything he said to you. When Dr. Macleod told me he was not then the editor of the *Gazette*, and that many of the articles for which you had attacked him were not written by him, I said I shall tell Mr. Wakley this—he laughed and we parted—he neither said, do, or do not; but I naturally concluded I was at liberty to act as I pleased, I therefore told you what he had said. Is it not possible you might have misunderstood me? If you persist that I did say I was the bearer of a communication, I really must request that we have an interview in the presence of a friend of Dr. Macleod and one of your own. If it then be proved that I am in error, I must bear the blame; at present, the affair stands in an awkward position; you assert, I contradict, Dr. Macleod is supposed to have deputed me to carry a message to you, his greatest public foe! I shall never be at rest till the matter is properly explained. Perhaps I might, among the many things I have stated to you of Dr. Macleod (entirely with a view to make you less hostile towards him), have dropt an unguarded expression, which might excuse your assertion, but I must be convinced of this. I have often spoken of you to Dr. Macleod, with the hope that I might be the means of effecting a reconciliation. Both Dr. Macleod and yourself must feel I had no other object in view. I shall not now mention the many things the trio have said; were I to do so, the world would be convinced that Mr. Wakley is no private foe of Dr. Macleod, that Dr. Macleod wished well to Mr. Wakley, and that the writer of this article would have been most happy if he could have united two persons, whose talents and *private worth* deserve the applause of all.

I am, Sir, your obedient servant,
J. H. TUCKER.

17, Howland-street,
Jan. 22, 1834.

As the truth of all we alleged is admitted by Mr. TUCKER in No. II., we cannot comprehend what is to be gained by the proffered interview. However, we cheerfully assent to the proposition, and are content to leave the selection of the arbitrators to Mr. TUCKER himself. If he will name three medical practitioners of respectability, whether they be Whigs, Radicals, or Tories, we shall be content. But what question, we ask, would the arbitrators be called on to decide? As Mr. TUCKER now clearly shows that MACLEOD at least assented to the friendly communication,—an assent unequivocally given,—of his wish to be on friendly terms with THE LANCET, the only point to be determined is, whether Mr. TUCKER stated to the Editor of THE LANCET that MACLEOD actually wished him to be the bearer of the peaceful offering. This, then, according to Mr. TUCKER's own admission, is now the only point on which a doubt can rest. We are perfectly content to leave the decison of this unimportant fragment of the question to arbitrators of Mr. TUCKER's own choosing. We have considered it best to accept Mr. TUCKER's offer thus publicly, rather than convey any communication to him on the subject.

RICE AND CHOLERA.—Extract from a letter written by a surgeon in the north to a friend in London, dated Jan. 14, 1834:—

"Do you know that the cholera has been existing in the Wakefield House of

Correction for this month or five weeks weeks past, and that there have been several deaths? I have been anxiously looking for a report of the same, in THE LANCET, from Mr. DUNN, who addressed a letter to the Editor, as an anti-Tytler."

The following is a part of the communication of Mr. DUNN:—"We have lately substituted an allowance of *rice*" in lieu of the previous diet of the prisoners, "the result of which I will communicate after we have made a longer trial of it."—LANCET, Nov. 9, 1833, page 248.

LETTER FROM DR. JOHNSON.

To the Editor of THE LANCET.

SIR,—The editor of the *Medical Gazette* still adheres to his statement respecting the alleged expressions used by me in the *Westminster Medical Society*, though I have positively denied them, and appealed to the whole Society on the subject. The *onus probandi* lies with the accuser, and as there were more than a hundred witnesses present on the occasion, it is incumbent on the editor to produce some proof, and then I shall have something tangible to deal with. Is it likely, Sir, that I should have made a statement which I knew to be false, and which would have been detected the very next day? As to mutual overtures, proposals, or arrangements, made and accepted, I have only to say: *first*, that I never made an overture or proposal of the kind in question, or of any kind, to the Editor of THE LANCET, nor he to me; *secondly*, that no personal or *private* interview ever took place between us for that, or any other purpose; and *thirdly*, that no epistolary correspondence ever existed between us for an "Arrangement, &c.," or for any other purpose whatever. If I subscribed five pounds for the prosecution of St. John Long, it was publicly, and not clandestinely, in the same way that I have subscribed on many other occasions, and for many other purposes, of which I am not ashamed. What crime next, from my amiable contemporary, who, while he stigmatizes the editors of other journals by name, takes care to conceal his own, and thus fights from behind a hedge? I am, Sir, your obedient servant, JAMES JOHNSON.

19 Jan., 1834.

P. S.—The scandalous insinuation that I suborned my son (for it does insinuate as much) to acknowledge himself the author of a paper in the *Medico-Chirurgical Review*, I throw back with scorn and disgust. It is a dastardly attack, which none but an assassin in the dark, or in a mask, would venture to make. It tends, more than anything which has yet happened, to demonstrate the polluted source from whence it springs. The *Medical Gazette* has now branded its own forehead with a mark of infamy which time can never efface. J. J.

*** On once more appealing to our reporter on the subject, that gentleman informs us that the report in THE LANCET is *verbatim*; and that, consequently, the words and meaning attributed to Dr. Johnson regarding an "arrangement" with THE LANCET, are entirely without foundation.—ED. L.

SUNDAY DOINGS IN CONDUIT-STREET.

To the Editor of THE LANCET.

SIR,—In compliance with your request, I take the earliest opportunity of informing you, that the name of the individual, who, by his unhandsome conduct, has made himself the object of the reproaches of the profession, is BALDERSON. I must beg leave to trespass so far on your valuable pages, as to request insertion for another instance of the grievance in question.

A patient of mine was taken to Sir A. Cooper's residence about twelve weeks ago, for the *worthy* Baronet's professional advice; but about six weeks afterwards, on the patient getting worse, it was deemed unadvisable to take her out, when Mr. BALDERSON made his appearance at her house as the regular medical attendant, in which capacity he has since continued up to the present date, receiving from the parties a fair remuneration for the medicines. These facts I only yesterday became acquainted with, on accidentally calling upon the family. But there is a feature in the above case which makes it doubly hard upon me, inasmuch as the patients are indebted to me for former attendance, &c., and will, I doubt not, ultimately pay, but that money which might perhaps be appropriated to discharge the account, is now paid over to the present attending surgeon, Mr. B., so that, you perceive I lose the advantages resulting from the case, while the interloper reaps the benefit so justly due to my *prior* services. Having stated thus much, permit me to ask how far the "*worthy* Baronet" is entitled to the appendix to his title, which I have put in *italics*? I am, Sir, your obedient servant,

A CONSTANT READER.

SALE OF VACCINE LYMPH.

To the Editor of THE LANCET.

SIR,—As you have never noticed the circumstance in your valuable journal, I presume you are ignorant that there exists in this metropolis *a shop for the sale of vaccine lymph*.

A case of small-pox after vaccination having occurred in this neighbourhood about the latter end of last month, I was requested to vaccinate an infant, and to revaccinate some other parties. I sent to the *London Vaccine Institution*, in Providence-row, Finsbury, for a supply of lymph, for which, not being a subscriber, I was charged the sum of *two shillings and sixpence*.

Now, Mr. Editor, let me call your attention to the injuries inflicted on the neighbouring medical men by such an institution. It professes to vaccinate gratuitously all who apply, whether objects of charity or not; and, therefore, not only deprives the practitioner of a source of emolument from his rich patients, but, by taking out of his hands the gratuitous vaccination of the poor, prevents him from keeping up a supply of lymph for the services of those who feel too much honest pride to apply to a public charity.

It is said, that these shopkeepers have applied to the Government for the privilege of receiving its "orders," and sending out their goods through the medium of the Post-office, free of expense, so as to have the benefit of a country trade in addition to their town trade. Would not the same privilege be desirable for other shopkeepers? I am, Sir, your obedient servant,

GEORGE JACKSON.

Church-street, Spitalfields,
Jan. 21, 1834.

NOTES BY GRACCHUS.

No. 3.—GRACCHUS TO HIS BRETHREN.

A TIME is fast approaching when, it is to be hoped, many medical men will be called before a Parliamentary Committee to state their opinions on the subject of medical reform.

The chief questions will be those which relate to the existence of evils or grievances in the profession. Others will be asked respecting the nature of the proposed remedies. It would be highly desirable that unanimity of sentiment should prevail on this topic, but that is not to be expected. The whole body of corporators and their followers or expectants will declare that the present system works well, that the existing institutions are all but perfection. In those ranks there will be great, if not complete, unanimity of sentiment; because one general and powerful cause will operate throughout them,—that of *self-interest*. The reformers, on the other hand, will be divided. Some will be influenced by selfish feelings,—many by crude or ill-concocted notions. It is best that the evil should be foreseen, and, if possible, guarded against.

There are some general heads with respect both to grievances and remedies, on which, it is to be hoped, reformers will agree. The abuses in our corporations have so often been pointed out in this journal, that it is unnecessary to dwell upon them. The incongruities in medical education should be carefully borne in mind, and those who are examined should point out the pernicious consequences which result from the multitudinous forms and *curricula* prescribed by the various colleges and seminaries of education existing in these islands. The medical degrees obtained in Oxford, Cambridge, Aberdeen, and St. Andrew's, where no efficient schools of medicine exist, will be a good set-off against the sticklers for upholding *all* existing institutions, and the declaimers against one Faculty for superintending medical instruction and practice. The degradation imposed on the whole profession by the concentration of all legal power over the greater number of medical practitioners, in a company of drug-merchants, should be urged on the notice of the committee, as a strong argument for the creation of a new and paramount power over a liberal and learned profession. The petty privileges and immunities conferred by separate and insulated corporations, to the exclusion of regularly-educated men who do not happen to be of their body, are crying evils, which a committee have only to comprehend in order to condemn. The system of professional remuneration, by charges on medicine instead of medical attendance, should be urged on the notice of the committee, as one fraught with evil consequences, both to the public and the profession. It is vain to say that general practitioners are already entitled to make charges for attendance on medical cases. A decision in a court of law forms no basis to act on, and the rule should be settled by an Act of Parliament. Another point to be urged, is the elevation of the whole scale of medical education, together with a searching public examination, after which the diploma or degree conferred, should empower the individual to practise

physic, surgery, midwifery, every branch of the profession, or any particular department of it (according to his inclination), throughout the whole of his Majesty's dominions; or, to use a common but fallacious expression in diplomas, the liberty of exercising his art and science, "ubique terrarum," though, in the next great town or city, "ubique" is now often pronounced as bearing the meaning of *usquam!*

As connected with an elevated scale of medical education, the present system of apprenticeship is deserving of profound attention. If the system be preserved, it ought to be modified. The apprenticeship ought not to commence before the age of eighteen years, in order that the preliminary education of youth, both classical and mathematical, may attain a liberal standard; and the five years ought to include the whole of the medical course of instruction; say two years for pharmacy, and the other three for lectures and clinical attendance. Let not general practitioners throw impediments in the way of a general elevation of their successors. Sacrifices of present emolument should be cheerfully made when the prize is a future aggrandisement of rank, respectability, and public estimation. A more minute investigation of this subject, however, will occupy another note.

The uniformity of medical education already alluded to, can never be effected without some ONE governing body to organise and enforce it. If the various universities and colleges be preserved independent, and at liberty to form and enjoin their various and heterogenous codes of professional instruction, chaos and confusion, feuds and jealousies, must continue to prevail. That ONE body, indeed, may for convenience' sake, be divided into three parts; but these three parts must be ONE, in kind, in law, and in sentiment. They must be trinity in unity—*tria juncta in uno*. Would it not be preposterous that England, Ireland, and Scotland, should have three separate and independent Faculties, with liberty to form, each its separate medical code of instruction? This would only reduce the heads of the hydra from twelve to three. With the extinction of existing institutions I have nothing to do, though the abolition of *some* of them would certainly be no national calamity. I only wish to deprive them of the power of doing harm. They may then do as much good, and exist as long, as they can. Oxonians and Cantabs may still resort to the temple in Pall-Mall, and superadd to the national scale of medical attainments, the honours and titles of academic bowers; but not exclusive privileges, or any invidious rank or marks of distinction beyond what their learning and talents may reasonably claim from the public and the profession. If, after an enlargement of medical education and a *public* exmination, there be individuals who consider an additional diploma from Lincoln's-inn-fields as a passport to fame and fortune, let them not, in God's name, be deprived of such a flattering unction to their souls; but let them not expect from *that* ordeal certain privileges and prerogatives which are not sought to be attached to the more searching and severe ordeal established by the legislature. Neither should we wish to break up the existing firm at the *Hall*. The partners of this joint-stock company have a very extensive concern to manage; and they have profit enough on the sale of their drugs, without turning medical legislators, and levying a tax on nine-tenths of the profession. Let them direct their domiciliary visits to the shops and laboratories of the chemists, who have a direct interest in the sophistication of drugs, instead of scrutinizing the surgery of the medical practitioner, whose success and reputation depend on having pure medicines to work with, and who can have no possible temptation to adulterate the remedies by which he hopes to cure his patients.

With this general outline I shall conclude this note, leaving a more particular examination of the subjects, individually, to future notes.*

GRACCHUS.

20th January, 1834.

THE COLLEGE MUMMY.

THE mummy, it seems, was, through "the liberality" of the Council of the College, placed beneath the hands of Mr. Pettigrew, after thirteen years entombment in the Museum,—the great sarcophagus of the College. It had been buried twice,—once in Egypt and once in Lincoln's-Inn-fields. It did not originally belong to the Hunterian collection, but was purchased by the Council from the collection of the late Mr. Salt, the Egyptian traveller.—Mr. Pettigrew admitted, at starting, that the examination of mummies did not always repay the trouble of stripping them, the Arabs being accustomed to rifle them for the gold and jewels sometimes contained in their vestments. From this circum-

* In my last note, page 613, line 59, for "beat" read *real*, and for "*case* of Macleod," page 614, line 4, read *cure of Macleod*.

stance, it frequently happens, Mr. Pettigrew observed, that mummies are found in cases which, from the inscriptions, it is evident they did not originally occupy. The old Persians and Syrians embalmed, after a fashion; but "high perfection" in the process was obtained only by the Egyptians. *Vide, passim*, Herodotus and Diodorus Siculus. The nation thought that the soul stopped in the body as long as the body was sound enough to hold it. Were this theology true, the soul of the present mummy has either long since departed, or is now as dry as a stick, for such is the body. The embalmers occupied only a secondary rank in the priesthood. They first made an incision in the left flank of the body and took out the contents of the abdomen, washed them and the cavity with palm-wine, and poured in a resinous or bituminous substance, of which natron, abundant in their springs, formed a large proportion. The intestines were similarly prepared, and either bandaged and returned into the abdomen, or placed in funereal vases. The brain was extracted through the nostrils with an iron instrument, so carefully, that the cribriform plate of the ethmoid bone alone was perforated. In another mummy, placed by the side of Mr. Pettigrew, thus served, the features had not been in the least disfigured by the removal of the brain;—the nasal bones and the septum narium were as perfect as during life,

After communicating some further information on the subject, Mr. Pettigrew examined the painted hieroglyphics and inscriptions on the case of the present mummy, referring in the course of it to some good drawings of them made by Mr. Clift, jun. The inscription (in the Phonetic character) ran round the case, from the foot of the right side to that of the left. It stated the deceased to be Horsiesi, the son of Naspihiniegori, an incense-bearing priest in the temple of Ammon, at Thebes. On a bandage which bound the legs together just above the ankles, the name and title of the deceased were repeated. The other bandages were disposed around the extremities, trunk, neck, across the abdomen, from the feet up one side, over the head, and down the other, and round the head. Their average breadth was that of one of our own pages, the finely-wove outside, the coarse within,—the usual custom. At one point two bandages were knotted together, and near the union was another inscription of the name and titles of the deceased. Between the thighs was discovered some bituminous powder containing a small Egyptian idol. Close to the body so much heat had been used in resining the bandages to the cuticle, that further examination was stopped. The eyes were artificially represented. On the breast was found a small amulet of carved wood, and near the umbilicus was the figure, in bone, of a scarabeus beetle, which, with the Egyptians, implied regeneration, fecundity, and resurrection. The nails were perfect. The surface of the body, where bared, seemed incinerated.

On the whole we may say of this exploration, that it afforded a good exemplification of the old adage, "Much cry and little wool." Respecting the interpretation of "hieroglyphics," let us observe, that nothing can be more arbitrary and fallacious. Champollion himself broke his heart at the vanity of the attempt, after devoting half a life to reduce them to some system whereby a tolerable degree of certainty could be obtained in their solution.

HOPITAL DES ENFANS MALADES, PARIS.

ANASARCA SUPERVENING ON SCARLATINA.—DEATH.

Dernier, a boy, 7 years of age, of good constitution, and having previously enjoyed good health, was received into the hospital on the 1st of October. About three weeks ago the child had been affected with a mild scarlatina, and during the convalescence from the disease he was attacked by anasarca.

On the 5th of October, when we first noticed the patient, we found him in the following condition:—The face and integuments of the whole body were pale and flaccid; the flesh much reduced; the lower extremities were considerably infiltrated, and the abdomen was swollen, and appeared to contain some fluid; there was also a good deal of infiltration into the cellular tissue under the eyelids, and the whole face was puffy; the skin is not warm, nor the pulse feverish; passed one stool during the night, and some pale-coloured urine; the child coughs a little.

6. State of extremities and abdomen continues the same; the scrota appear œdematous to-day, and we can feel a slight fluctuation in the abdomen; the child vomited yesterday evening, and had some convulsive motions which lasted for two hours, but they soon yielded to antispasmodics; the stomach is now a little sickish, and the child has some fever, with accelerated pulse; he passed two liquid stools. *Decoctum Caluce*, ʒij (a new diuretic); *Syrup of Gum*.

7. The child coughs a good deal to-day; he made but little urine since yes-

terday; the skin is hot; tongue dry and red at the edges; the infiltration of the extremities is diminished; the respiration seems to be accelerated, and upon auscultating we find at the summit of the left lung, posteriorly, a souffle bronchique, mixed with some moist râle. *Syrup of Gum*; lavement emollient; bleeding to iv oz. from arm.

8. The bleeding has produced very little effect; the pulse and skin still remain febrile; there is a great deal of souffle without râle or crepitation at the left side of the chest posteriorly. *Decoction of Mallows; Syrup of Gum; Decoct. Caluce*, ʒiij.

9. The patient had a great deal of diarrhœa during the night; passed more than ten liquid stools; the fever is considerable; the urine, which he passes in some quantity, throws down a dark thick deposit; there is souffle behind at both sides of the chest. *Decoct. Malvæ*; two lavements; draught with 24 gr. of *White Oxide of Antimony*.

10. The face of the patient is less swollen and puffy; the infiltration has disappeared from the lower extremities altogether, but the abdomen is more enlarged; the cough continues the same, short and dry; the skin is warm and the pulse febrile, 116; the patient passed a small quantity of dark-coloured urine; we now hear crepitation at the right side of the chest, and souffle at the left. *Decoct. Malv.; Syrup Gom.*; lavement.

12. The child coughed much; he had four stools since yesterday, and passed a greater quantity of the same dark-coloured urine; he has inclination to eat and little thirst; the crepitation is feebler at right side; at the left we hear a souffle tubaire; pulse 114. *Decoct. Malv.; Syrup Gom.; Oxide of Antimony*, 60 gr.

13. Child continues nearly in same state; lavement; passed a good deal of dark urine, and four stools; the skin is cool to-day; pulse 100; he coughs as before; the abdomen appears less swollen, and the patient's strength is not much broken down, though he is very emaciated. Contin. remed.

14. Passed four stools; made water more abundantly; pulse 100, febrile; face and abdomen less swollen. *Oxide of Antimony*, 80 grs. Contin. remed.

15. Passed the same coloured urine, but in lesser quantity; two liquid stools; a little fever, and some thirst; the face is less swollen than before; indeed, it is nearly natural; the cough appears somewhat diminished, but there is matity of the right side of the chest, with râle crepitant on both sides. Contin. remed. *Oxide of Antim.* 120 grs.

16. The effusion into abdomen is much diminished; the patient passed a great quantity of urine two stools; pulse is 116; we hear the râle redux on the left side of the chest, with some souffle at the summit of the lung. *Ox. Antim.* 90 grs. Contin. remed.

18. Child has had some little diarrhœa; he appears reduced; vomited once yesterday; the skin is moderately warm; the pulse 110; the tongue clean and moist; state of respiration nearly the same. *Oxide Antimon.* 30 grs.

20. Passed a little urine, less coloured; one solid stool; skin is not feverish; the souffle tubaire has disappeared; there is still some matity over the left lung, but the right side of the chest gives an excellent sound. The child coughs less. Contin. remed.

21. Cough the same; passed 8 oz. of clear urine; two or three liquid stools; the skin is not feverish, but the pulse is very small and quick, 140. *Oxide of Antim.* ʒii.

22. The skin is perfectly cool to-day; the patient says he coughs less; crepitation is very loud on both sides of the chest; tongue clean; he vomited once in the evening; no swelling of extremities or abdomen. *Syrup Gom.; Ox. Antimon.* ʒii; to be taken twice; milk.

23. No diarrhœa, or vomiting; no fever; coughs the same; tongue clean and moist; there is great matity over all the left side of the chest, and the pulmonary expansion cannot be heard there at all. *Oxide Antim.* ʒiv.

24. The child looks weak; his face and body are very thin; no diarrhœa; the tongue is clean, and the skin moderately warm; pulse 114; he still coughs a good deal; the abdomen is less swollen; passes little urine; the absence of respiratory sound and matity on left side. Contin. remed.

25. Coughs the same; one stool; there is a little respiratory sound to be heard on the left side, mixed with a mucous râle; skin cool; the patient made a good deal of urine during the night. *Decoct. Caluce*, ʒii; with *Syrup Quinæ*, ʒii.

26. The child appears much weaker; he coughs less; does not sleep well; the matity of the left side of the chest still continues, and there we have some crepitation also. *Decoct. Caluce*, ʒiv; *Syrup Quinæ*, ʒii.

28. Has had a good deal of diarrhœa; skin cool; pulse 90, small and hard; the

tongue clean and moist; the matity of left side still persists, with some crepitation below, and souffle tubaire above; the child is rapidly losing strength. Contin. remed.

30. Has had considerable diarrhœa; is much reduced and feeble; skin cool; no fever; respiration is feebly heard on both sides of the chest.

The patient sunk gradually during the day, and died on the 31st.

To the Editor of THE LANCET.

SIR,—An apothecary of the name of Cranwell is at present under the care of Sir George Tuthill, at the *Westminster Hospital*. His disease is consumption; he appears to get daily worse, and is recommended by the physician to leave the hospital. The poor man has not a penny, nor a friend to give him one. He was an assistant to a gentleman of the name of Crane, residing in Princes-street, Soho. He lived many years in Dublin, with an apothecary, of the name of Barker. He has been in London, he says, three years, during which time his sufferings have been great, passing many days without food, and unable to procure employment. Should you notice this in your valuable journal, you would be doing an act of great charity. A shilling from each pupil at the hospital would send the poor man home. I am sure the cupper, Mr. Knox, would receive it. I remain, with great respect,

A PUPIL AT THE WESTMINSTER HOSPITAL.

Jan. 23.

To the Editor of THE LANCET.—Sir, Some time back you inserted a letter in your journal, in which inquiries were made respecting my health. The person who wrote the letter wrongly supposed that I had been operated upon by lithotripsy six times without success. The operations that were performed, several times it is true, were, I am happy to say, attended with the greatest success, and I am now, thanks to the kind attentions of Baron Heurteloup, returned home perfectly well. I remain your most obedient servant,

WILLIAM STONE,
Gamekeeper to the Duke of Devonshire.
Jan., 1834.

CORRESPONDENTS.

LITERARY INTELLIGENCE.—Mr. Wardrop is preparing for publication a new edition of his valuable work on the Diseases of the Eye.

Professor MECKEL died on the 31st of October last, at Halle, in the 53rd year of his age. He was born in 1731.

P.—They may be obtained of Mr. C. Clark, veterinary surgeon, of Hatfield-street, Stamford-street, Blackfriars. They answer admirably when fixed on colts,—on those feet which have not been destroyed by the old method. We have them in use at this moment. We are not acquainted with Mr. B. C.'s address, but Mr. C. Clark is the nephew of Mr. B. C.

A Medical Student.—It is both combustible and inflammable.

A. Z.—On the production at the Hall of the indentures of the apprenticeship already served, we believe he would be admitted to an examination. A second apprenticeship would in the present state of things be very inconsiderate.

The *Tipperary Free Press* has reached us.

F. F.—The diploma of a Surgical College would be demanded, or proof of the party having passed an examination at one of those institutions. Some interest is necessary in the appointment.

The diagrams for the paper of *Mr Bryan* are now in the engraver's hands.

Mr. Macilwain's letter came we believe to hand, but has, we are sorry to say, been mislaid. We shall most probably find it in a few days

A sufficient part of Mr. Burke's letter shall appear.

The paper of *Dr. C.* has not yet been received. Was the witling worth notice?

Communications have been received from *Mr. Symonds*, *Mr. Ragner*, *Mr. Board*, &c., &c.

We intended to publish the sensible letter of *A Kentish Practitioner*, but so numerous have been the communications forwarded to us, with "details" for the arrangement of the new medical constitution, that we are compelled for the present to withhold them all,—especially since the germs of the great majority of the suggestions are already to be found in the pages of THE LANCET. We shall, however, always be happy to hear from a *K. P.*

The notice from the City of Lon. Lit. Instit. was received too late.

ERRATA.—The "reader" at the printing office was too much delighted last week, at the *exposé* of Roderick, to attend to "literals," and, accordingly, let the word "exhibited" stand, in one of our leaders, line 33, page 642, in place of *attributed*. In line 6, page 643, the *full point* should be a *comma*.